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### Irish H & V News

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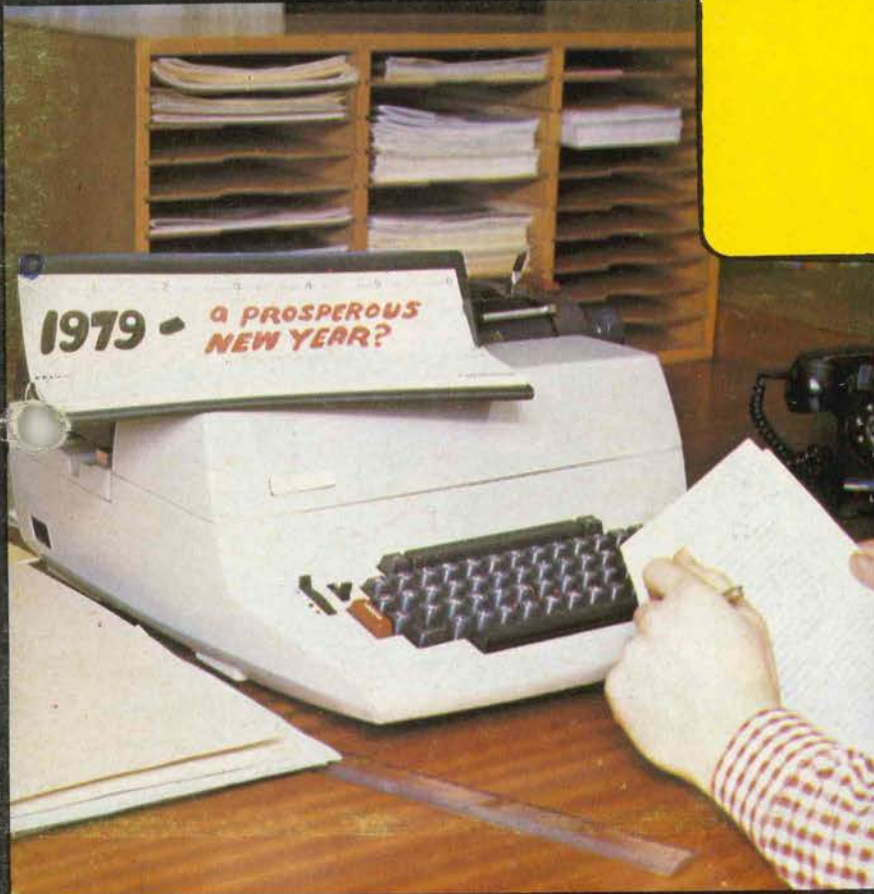
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# UNCERTAINTY DESPITE OPTIMISM

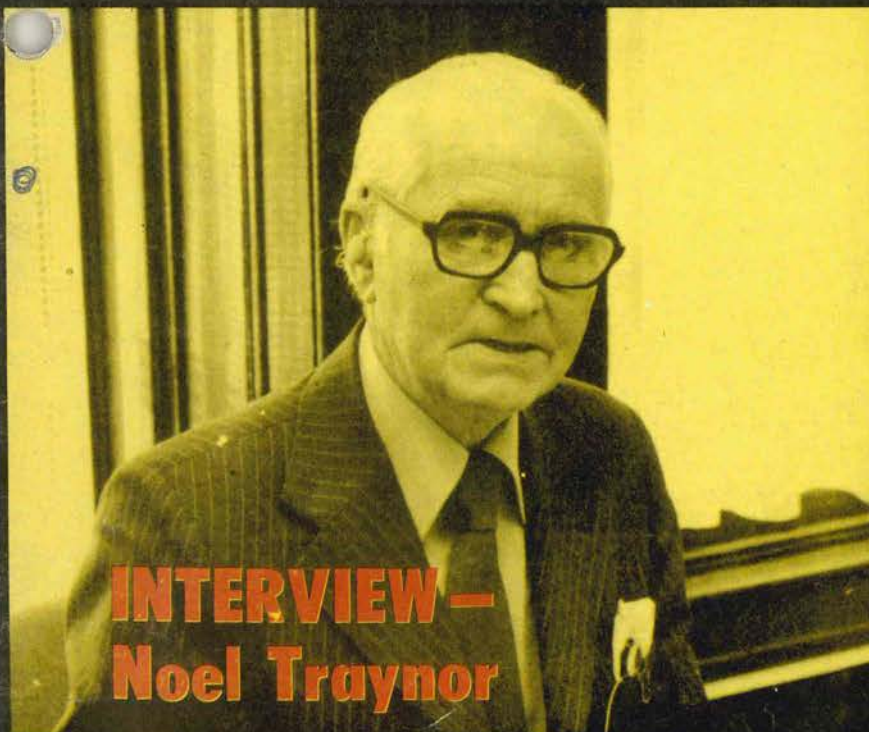


# IRISH H & V NEWS

JANUARY 1979

## PRODUCT FEATURES:

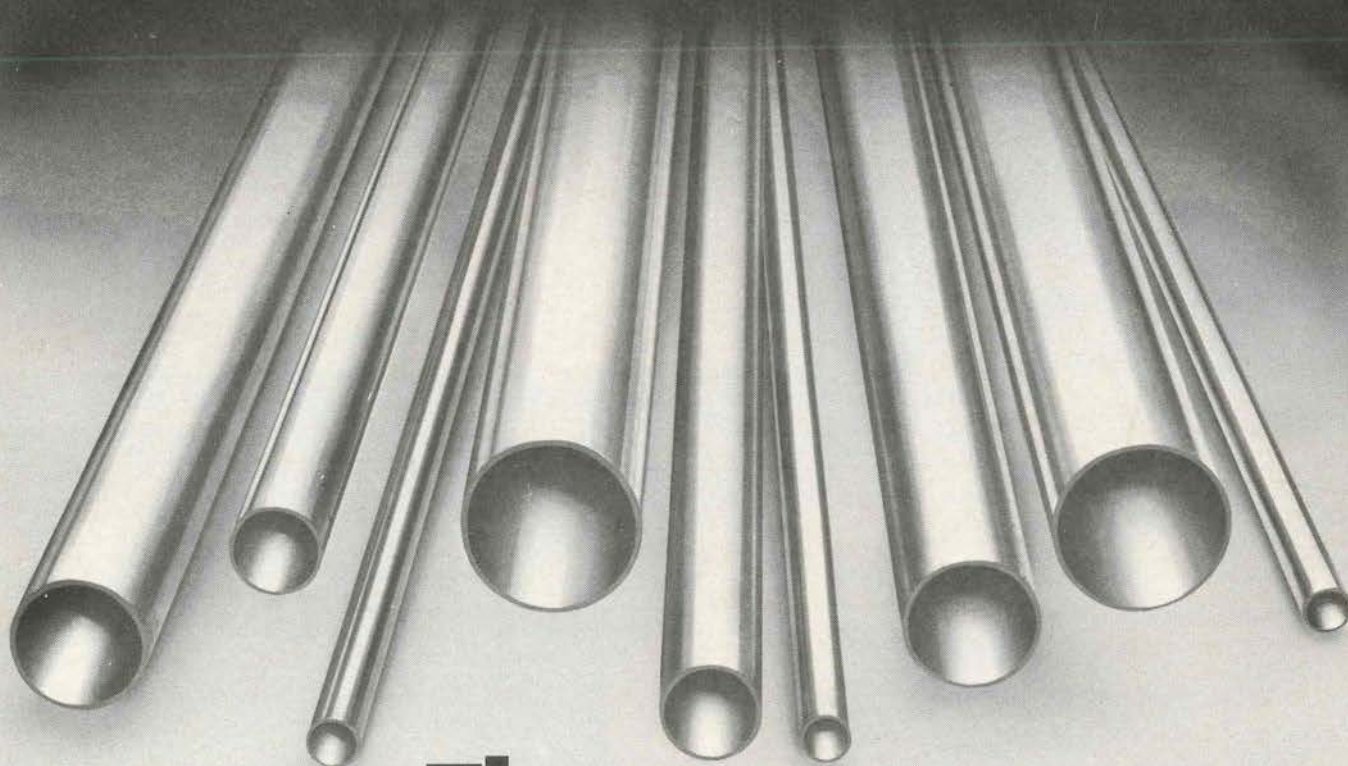
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**INTERVIEW —  
Noel Traynor**



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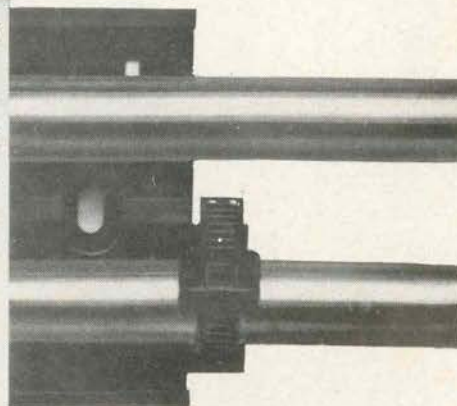
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IHVN/12/78





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## IN THIS ISSUE

**COVER  
STORY...**

# Uncertainty Despite Optimism

With all the self-congratulations that were being thrown about like confetti at the end of 1978 well behind us, we are now being asked to believe that 1979 will be a year of further record outputs, and greater profits, with all target expectations being reached. The looming shadows of the forthcoming Budget, however, should temper such optimism, so at this stage 1979 should remain a wait-and-see year.

Certainly the Government can, and indeed has, pointed to the 7% growth target being achieved and new jobs being created. On the IDA front, Michael Kileen was also publicising the fact that the target of 27,000 new jobs for industry had been surpassed by 3,000 and that they were on course for 1979 with another 30,000 jobs and help for several hundred smaller industries.

In the construction industry it was certainly a boom year with no signs of it abating in 1979. The increase in house prices had a spin-off for all sections of industry i.e. materials, plumbing, electricity, etc. But warning bells are being rung about shortages of essential supplies, particularly in cement and copper.

Coras Trachtala also announced record exports of over £2,500 million which they attributed mainly to the industrial sector. Ireland now ranks 41st in the world's trading figures league. Not bad for a small country that is largely dependent on its European neighbours.

Certainly, these are all positive factors upon which to build and plan for the coming year. However, all they offer is a secure foundation and cannot be properly evaluated until full details of our entry into the EMS, the budget, material shortages and wage increases have been announced.

## EMS CAUSES CONFUSION

Confusion rather than certainty was the order of the day as we enter 1979 with the new European Monetary System. Dealers in exports were still unsure of the benefits of joining, but Coras Trachtala had some words of advice (page 2).

## BIG FREEZE UP - WHO PAYS?

A major row is looming between the fuel suppliers and customers after the fiasco of several thousand systems in domestic heating and farming equipment freezing up during the recent cold spell when temperatures dropped to the lowest registered in nearly 50 years (page 6).

## PRODUCT FEATURES

This month IHVN looks at three market sectors — Filters, fans and blowers (page 26); Water treatment (page 13); and Plumbing equipment (page 37).

## IIRS ACCUSED

In this month's interview Noel Traynor accuses the IIRS of having "aborted" plans he and three other prominent members of the industry proposed for the introduction of a Code of Practice to govern the installation of domestic heating systems (page 10).

We regret that because of the postal dispute some of the copy intended for publication in this issue, particularly the product features, has not arrived in time for inclusion.

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# IHVN NEWSDESK

## EMS - UNCERTAINTY CONTINUES

Leading spokesmen for the trade were reluctant to comment on the possible effects of the Government's decision to enter the European Monetary System (EMS). Certain fears were expressed by knowledgeable people, but despite gentle prodding, nobody wanted to be quoted in print until the full extent of the Government's deal was clearly defined.

However, IHVN has ascertained that English buyers of Irish goods will want to continue paying in Sterling, and Coras Trachtala has warned export firms to cover themselves against foreign exchange, risks (Sterling is now deemed to be a foreign currency) just as they do in other export markets, e.g. West Germany or the United States.

One consequence of this is that each exporter must decide in which currency to quote and to be paid in. Failure to stipulate the currency of payment for exports exposes the supplier to the risk of being paid in

a currency which is less valuable at the time of payment.

While Irish exporters have traditionally occupied a special place in the UK market (Ireland is their fourth largest customer) the obvious tendency to ask a UK buyer to pay in the Irish Punt in turn marks the Irish exporter in the eyes of his customer as a foreign supplier. For this reason, Coras Trachtala also points to the dangers of altering existing supplier/customer relationships and warns Irish exporters to weigh up the consequences of any such change.

Until the Government therefore makes clear the consequences to the trade, exporters are strongly advised to make immediate contact with their UK customers and reassure them of their ability to continue their existing relationship.

However, by the beginning of January it is now accepted in banking circles that a "forward market" for the Punt will have been established,

thus assuring exporters and importers complete cover against amounts due or owing to Britain for a full year in advance for the cost of a relatively small commission.

The Central Bank has requested banks and other Irish foreign exchange dealers to quote all rates on the basis that we will maintain the parity link with Sterling for at least a year.

An example to assist anybody in doubt is as follows: If an exporter sells £10,000 worth of goods to a British customer with payment due in three months, he can immediately arrange for his bank to sell that £10,000 in Sterling — which he will receive in three months — for £10,000 (Punts). The exchange is made when the bill is paid, so he is guaranteed that when he gets his £10,000 Sterling in three months time, he will be able to convert them into Punt on an equal value basis.

In the same way, an importer who is due to pay £10,000 Sterling to a British supplier in three months can arrange now to buy the necessary

Sterling funds for £10,000. And the deal holds whether the Punt actually revalues (or devalues) against the Sterling meanwhile.

Exporters will be able in January to gain protection on all exchanges from leading banks at a ¼% premium at par.

It is not yet clear at the time of going to press just what the effects of the EMS will have on other European markets for Irish exporters. But they will be obliged in future for deals over £10,000 (Punts) to have a copy of Exchange Form Declaration "A" completed and signed by any commercial bank. Declaration Form "B" is now obsolete.

The British Government however, IHVN has learned, will not insist on any new documentation for exchanges at border posts.

### CIBS Award

CIBS have so far received six papers from around the country for their CIBS Student Award Scheme. Although the final date for the entry of papers was the 31 January, Michael Buckley has said

they are prepared to extend this date for at least another two weeks, provided they are given prior notice from anybody interested.

Final adjudication will take place at the end of February, with the winner being notified early March.

### Tynagh Flooded

Tynagh Mines' the lead, zinc and silver mining company that has been beset by industrial troubles recently and which only has a life expectancy of about 18 months, was very nearly closed prematurely by the recent floods.

Millions of gallons of water poured into the mine after a huge drainage pipe burst. It took 300 workers working round the clock for 48 hours to avert the water reaching the main switchroom. Luckily, the threat to the switchroom was averted when two large pumps brought from Tara Mines and Dublin were installed and put into action.

### ESB Boost for Peat Power

The ESB has initiated its part in the Third Peat Development Programme by placing an order for two peat-fired boilers for installation in the 40 megawatt extensions at the Lanesboro and Shannonbridge power stations.

The order was placed with a consortium of two German firms — Vereingte Kesselwerke of Dusseldorf and F Lentjes, also Dusseldorf. The Irish representatives are H R Holfeld Engineering Ltd.

The units are expected

Staff from Haldane Shiells of Newry & Newtownards were guests of Myson (Ireland) Ltd for a product training session in Dublin recently. In the picture are (from left): David Graham; Stanley Weir; Alan Beattie (Myson); Peter Clarke; Noel Connolly; Alyn Thomas; John Campbell (Myson); John Cunningham; Joe Smith (Myson); William McGrath; Nigel Cox, and Lewis Gray (Myson). The photographer was Jim Carraher



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# IHVN NEWSDESK

ted to come into service in Shannonbridge in 1982, and in Lanesboro in 1983. The total cost of the new work is expected to be about £43 million. About half of this will be carried out with Irish labour and materials.

## TCS Go 'Irish'

Heating and air conditioning control specialists Temperature Control Systems Ltd has become one of the latest members of the 'Guaranteed Irish' scheme.

The company is engaged primarily in project design, manufacture, installation and commissioning of control panels and systems and employs 17 people at its Tallaght premises.

## Zinc Refinery Plan for Kerry

Kerry County Council has received an application from the Industrial Development Association for outline permission to build an electrolytic zinc refinery at Ballylongford.

The IDA were asked by the Government to carry out studies to determine the best refining methods and choose the most suitable site in order to protect the environment. Presumably the Government want to have all the facts at their disposal, in case of attempts by environmentalists to raise objections.

The new refinery —

expected to cost £100 million and employ, when fully operational, some 500 workers — is to be located on a 400-acre site on the south bank of the Shannon estuary and is expected to produce 100,000 tonnes of zinc per annum from 190,000 tonnes of ore concentrate from the Navan mines.

It is expected that the construction of the refinery will take some two to three years, giving a welcome boost to the construction industry and work to 650 people.

## Watermiser for Dublin ?

Vincent Flynn, sales director of Watermiser Ltd, manufacturers of centrifugal fan cooling towers has told IHVN that his company were still

seriously considering the possibility of opening a Dublin Office.

"We are still looking very closely at the Irish market" Mr Flynn said "and we hope in the New Year to come to some decision on the matter".

Watermiser Ltd have installed over 100 cooling towers in Ireland. During the past year they held two seminars in Dublin which were well attended by consultant engineers.

## Lighting Environment

A seminar "Lighting Environment" and sponsored jointly by the CIBS and the IEE will take place at the Irish Management Institute, Sandymount, Co Dublin, on Tuesday 23 January.

The seminar will run from 9.30am to 5.00pm

and will have six speakers: Michael Clark, chairman, lighting division, CIBS; Michael Maloney, ESB; Peter Platin, Concorde Lighting Ltd; Lou Bedocs, Thorn Lighting; Patrick Molunby, Dublin Corporation and Thomas Mahon, ESB.

Mr Seamus Homan, chairman of the CIBS will welcome the delegates, and chair the first session. Other session chairmen will include: Timothy O'Brien, chairman of the IEE; Michael Clark, CIBS, and Sean Mulcahy of Varming Mulcahy Reilly Associates.

Michael Buckley of CIBS told IHVN that there were 80 places available at the seminar and the fee — which will include copies of the presented papers, morning coffee and lunch — is £25. Further details can be had from either P. J. Clonan, Secretary,

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CIBS, 214 Clonliffe Road, Dublin 3; or P Molumby of the IEE, Tel: 758711.

## Turbine Firm to Open Plant

An American company, Solar Turbines Inc, is to open a plant in Dublin shortly, once more negotiations have been completed with the IDA.

Last year it supplied some turbines to Marathon's Kinsale Gas Field.

It is understood that Dublin will be used as a base for servicing offshore turbines throughout Europe and the Middle East. It is not clear whether the company will manufacture its turbines in this

country.

Solar Turbines is based in San Diego, in California, and is a subsidiary of the giant International Harvester Corporation.

The Dublin company, Hypower International Ltd, is the Irish agent for Solar Turbines.

## Cooltech for R S White

R S White Ltd have recently been appointed sole agents in Ireland for Cool Technology Ltd and in a short while have supplied several different sizes and types of cooling towers to a wide range of industry such as Veba Ltd in Wicklow, Molex Ltd in Shannon and also M F Kent & Co Clonmel.

Cool Technology manufacture a complete range of cooling towers, starting with the Cool-

tech packaged units continuing through to larger site erected towers have a capacity of up to 200,000 gph. Cool Technology Ltd are setting new standards in the industry for quality, minimum maintenance, delivery and appearance.

Their range of cooling towers is completed by their ability to design custom built towers for special applications. These towers can be either induced or forced draught type with either splash or film packs, fitted with centrifugal or axial fans and can be manufactured in a wide range of materials.

Cool Technology's position of being both designers and manufacturers of cooling towers and shell and tube heat exchangers means that they can often show considerable savings in the total costs of such an installation. This optimisation of the two

designs avoids the necessity of having to fix the size of one unit before going to another manufacturer for the price and size of the other.

## Expansion for ABS Pumps

ABS Pumps Ltd are intending to start manufacture of five new products, including sensitive regulator valves for central heating systems, Mr Des O'Malley, Minister for Industry, Commerce and Energy said at the official opening of the new ABS factory extension in Wexford last month.

He said many of the ABS agents in more than 30 countries were now

supplied directly from Wexford, and that the company expect the American market to expand significantly in the next few years. This will mean a trebling of their output.

To cater for its expansion plans ABS Pumps bought a 26,000 sq ft factory, which was formerly occupied by International Transmissions Ltd. The I.D.A. has extended the factory by a further 26,000 sq. ft.

Next year, during the second phase of the expansion programme, a further extension of 65,000 sq. ft. will be built bringing the company's factory space to approximately 210,000 sq. ft. This represents a total investment of over £4.5 million in site, buildings, plant and machinery.

The company also intend to increase its workforce by 200% over the next few years.

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## IHVN NEWSDESK

## IDA to Spend Another £9.25m

A considerable impetus to the Irish construction sector, and a related spin-off for associated services including heating and ventilation interests, is envisaged by the Government in the recently published details of the second phase of their Fourth programme of advance factory construction.

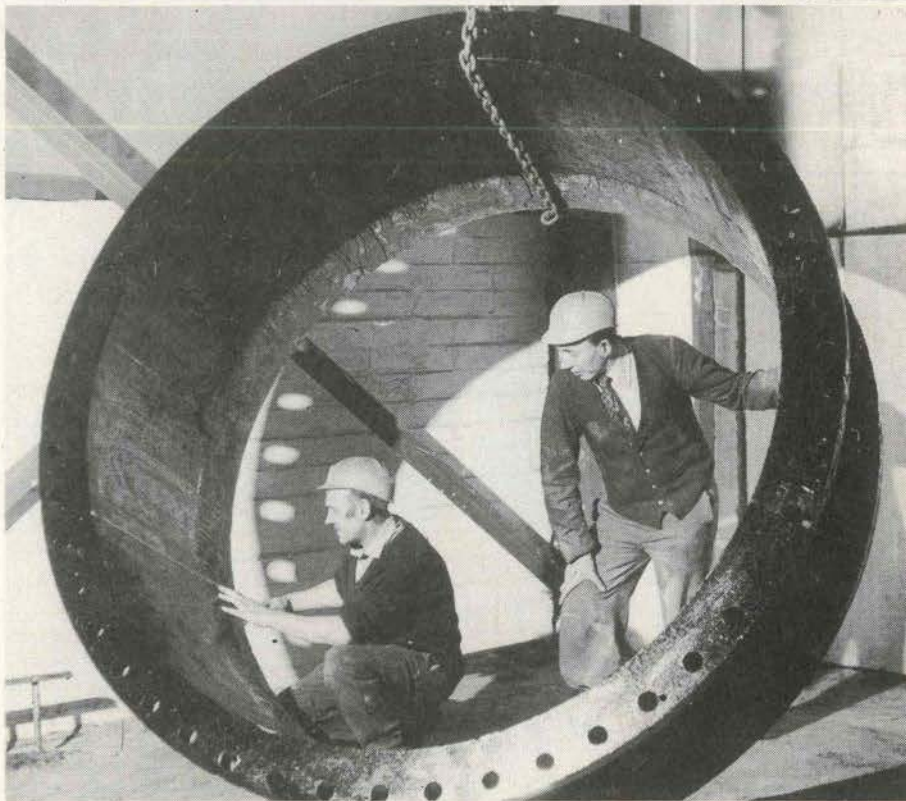
A total of 31 factories ranging from 7,000 to 40,000 sq ft and four cluster units are to be built during the next few years, with a total investment of £9.25 million.

The units are to be built in locations in every

part of the country. Donegal Region is to get one at Moville; North West Region, four, at Sligo (cluster) Ballinamore, Easkey and Drumshambo. In the West Region, there will be one factory and a cluster in Galway, and single units at Clifden, Charlestown, Oughterard, Portumna, and Keel.

Mid West Region: Raheen (two doubles), Ennis, Roscrea, Scariff, Kilrush, Kilmallock, South West Region: Ballincollig, Cork City North (cluster), Tralee, Bandon, Listowel, and Skibbereen. South East Region: Waterford (factory plus cluster) and Cashel. East Region: Athy and Wicklow/Rathnew. North East Region: Dundalk, Monaghan and Belturbet. Midlands Region: Mullingar and Banagher.

It is hoped to start construction in April. Construction work on



A three-ton flanged and plain end puddle pipe, which is the largest diameter cast iron pipe ever manufactured in Ireland, is seen above receiving its finishing touches at the Tonge & Taggart Foundry. The pipe which has a flange diameter of 7ft 6ins and an internal diameter of 6' 6" was manufactured for Ascon Ltd who are installing it on the site of the ESB power station under construction at Aghada, Co Cork.



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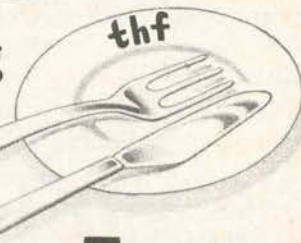
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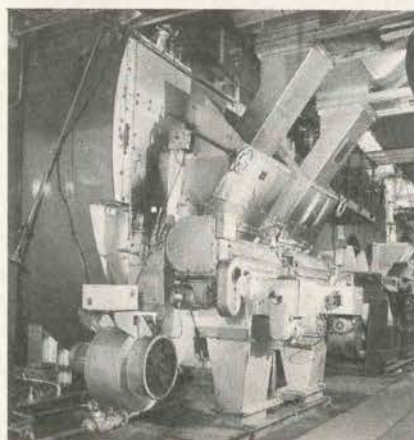
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the seven locations designated by the first phase of the fourth programme is hoped to begin in February.

# Irish Offshore Contracts Criticised

The awarding of offshore contracts to foreign companies that did not take on an Irish partner, and the poor state of industrial relations in the industry, were criticised yesterday by Mr. Fergus Cahill, head of the ocean services division of the IIRS.

Speaking at a luncheon hosted by the Irish Offshore Services Association in Dublin earlier this month, Mr Cahill said it was "quite unnecessary for large construction and development contracts to be awarded to foreign firms."

"A joint venture or other such means, can be accomplished without additional cost or difficulty."

He went on to criticise both public and private companies that did not demand that an Irish partner be taken on by a foreign company awarded a large contract in this country, and added that his criticism was not confined to offshore contracts.

Turning to the amount of money spent off this country, Mr Cahill said that in 1976, only £1.5 million was spent on exploration, but this mushroomed to £12 million this year. In 1976, Irish firms won 16.7% of this business and this increased to 26.4% this year. He suggested that more consor-

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Josephine Pouch of Crossflow Airconditioning was presented with a cut-glass decanter recently, her prize as a regional winner in the 1978 Golden Voice telephone personality competition. Making the presentation was Michael Murphy, (second left) managing director of Golden Pages, sponsors of the competition. Attending the presentation were Jim Coffey (left) and Dan Heeney, joint managing directors of Crossflow.

# Big Freeze Up— Who Pays

The burst pipe crisis situation for contractors was seriously worsened when, as temperatures dropped below zero, gas oil failed to perform, obviously catching the oil companies off balance.

While burst pipes are part and parcel of any contractors job, the incredible situation whereby thousands of oil-fired central heating systems — together with farming equipment and transport — ground to a halt, when oil began to coagulate in sub-zero temperatures, has led the Minister for Industry, Commerce and Energy, Mr O'Malley, to set up an urgent investigation in order to placate angry householders and farmers.

Serious allegations were being bandied about before we went to press that major oil industry interests responsible for the supply of domestic heating oil and diesel oil had deliberately, because of a cost saving decision, reduced an additive which improves the properties of the oil for use during winter months.

The result was that the oil, apparently made to sustain freezing temp-

erature of minus 6 degrees, began to thicken and wax when the temperature dropped even below zero.

Contractors throughout the country reported to IHVN that they were unable to cope with the demand for assistance, and hardship was suffered in many places. For the farmers part the IFA have made no secret about where they think compensation should come from.

Domestic users at the moment will obviously have to wait for the results of the Ministers investigation. One hopes that this inquiry will not appear in the summer months, when the populace will have almost forgotten the events of the past few weeks.

Already, the suggestion by the Irish branch of the Institute of Petroleum, that consumers should insulate tanks and fuel lines with straw, old sacking or other suitable material, has drawn a strong retort from Mr Frank Fahey of Frank Fahey Commercial Ltd, the Fiat truck distributors.

Mr Fahey said that it was not the function of his customers, or any other customers to insulate their systems as described by the IBIP "It is the function of the petroleum companies to provide my customers and the public with value

for money at all times and under all conditions, and in this the common good must transcend the corporate image".

The IDHE also told IHVN that they would be reviewing the whole situation at their January meeting, when a clearer picture emerged of the complaints and areas involved.

Obviously, the most puzzling aspect of the industry and the Government inquiry will be that despite the unusual weather conditions prevailing here at the time, one wonders just how other European countries with much lower temperatures than Ireland (including the UK) did not suffer the same problem of freezing oil.

As we went to press we learned that one major oil company, BP, have stated that they will not countenance any compensation claims. They also revealed that oil supplied in the summer months is different from winter oil, being resistant to temperatures only as low as zero degrees Celsius.

Winter oil, IHVN has learned, only comes into production at Whitegate, BP's suppliers, from October 1. This would infer that most of the present problems of freezing up arose because many customers still had a plentiful stock of summer oil.

## Safety Valves for Domestic Boilers

There have been several accidents, including two fatalities, in recent weeks due to domestic boiler explosions. While the actual cause of the explosions is still being investigated (technical reports have to be prepared for future inquests), a spokesman for the IIRS, interviewed on RTE following the death of a young married woman at Gortacur, near Tullamore, suggested that manufacturers might have to consider fitting safety valves or pressure gauges in the future to domestic heating systems.

Dublin Corporation some time ago gave warning to an estimated 10,000 tenants not to tamper with heating and water boilers in their flats. It was discovered after an accident in which two women received injuries, when the boiler blew up, that someone had tampered with the pipes attached to the water heating system.

Noel Traynor (see story page 1) told IHVN that the majority of the accidents involving boiler explosions were due to incorrect installations caused by the lack of adequate standards.



# How's your



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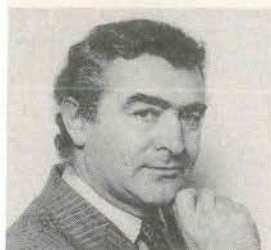
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# PEOPLE



Charles Wheeler of Barlo Clonmel.

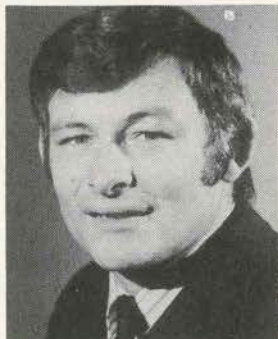
Barlo Group Ltd, Clonmel, manufacturers of central heating radiators and distributors of farm machinery, have appointed Charles J. Wheeler as group personnel and organisation development manager.

Prior to this, he was with the AnCO Engineering Training and Advisory Services. He formerly worked with Henry Ford & Son, Cork, and Pressed Steel Fisher in Britain.

Mr. Patrick A. Holden, director and sales manager of Tedcastles

Oil Products, has been appointed overall sales manager for the Tedcastle group of companies. He is succeeded as sales manager of Tedcastles Oil Products by senior industrial representative, Mr. Enda C. Mulvey.

Mr. Holden joined Tedcastles McCormick & Co. Ltd. in 1964 as sales representative in the coal section. In 1970, he transferred to the oil



Patrick Holden, Tedcastles Oils.

division in charge of operations and adminis-

tration. He was appointed sales manager of the oil company in 1973, and joined the Board of Directors in 1977.

M. F. Kent & Co. Ltd., the Clonmel based multi-services contracting company, have formed a new company, Clonmak Ltd, which is to specialise in the manufacture of process control panels, pressure vessels, tanks, in metal and pipework fabrication, and in the manufacture of stainless steel products.

Mr. Brian T. Gibson, B. Sc., C. Eng., M.I. Mech.E., has been appointed general manager of Clonmak Ltd., which has a staff of 30. Mr. Gibson spent the last ten years working in the Far East, Rhodesia and South Africa for a number of engineering companies. A graduate of Strathclyde University, Scotland, he has also



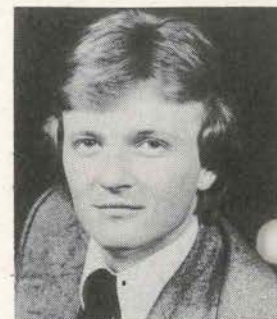
Brian Gibson, Clonmak Ltd.

previously worked in his native Belfast for James Mackie & Sons Ltd.

The new company will direct servicing of clients with a similar service to other companies and division within the M. F. Kent Group. At present the company are working on large contracts for C.I.E., the E.S.B., and a number of creameries.

Walker Air Conditioning Ltd, Dublin, sole distrib-

utors for Vokes filters in Ireland have announced the promotion of Alan O'Connell, (22) who is now responsible for the sales of Vokes filters throughout the 26 counties. He joined the company three years ago and has gained experience in both the accounts and sales side of the business.



Alan O'Connell who is now responsible for the sales of Vokes filters throughout the 26 counties of Ireland.

Des Collins, who has been appointed a Director of Environmental

(Q)

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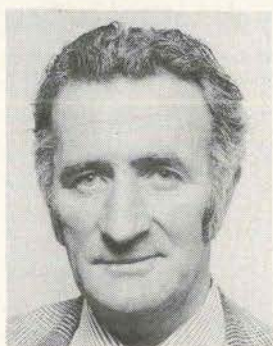




# PEOPLE

Supply Co, joined one of Northern Ireland's leading ventilating and air conditioning contractors, A McFarlane & Co Ltd, Prince Regent Road, Castlereagh, Belfast in 1968, where he trained under Mr W F T Lee for eight years. He joined Environmental Supply Co Ltd in 1976 where he has been actively involved in sales of fans, grilles, air handling units, etc and specialises in dust extraction equipment and variable volume fans.

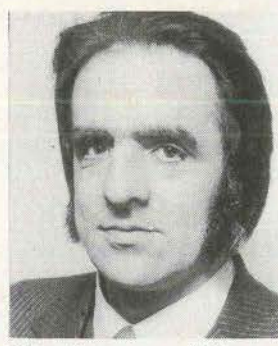
Last month the employees of Bord na Mona elected four of their colleagues to be members of the Board. The elections were held as part of the new worker participation scheme and in all eight candidates were nominated. There was a poll of 78% from a total electorate of 4,366 and the successful



Tom Browne, of Timahoe, who is employed at the Board's Timahoe Works.



Harry Devereux, of Portarlington, who is employed at the Board's Clonsast Works.



Brian Corcoran, of Gneeve Bawn, Tyrrellspass, who is employed at the Board's Derrygreenagh Works.



Jack Molloy, of Ballyboy Road, Kilcormac, who is employed at the Board's Boora Works.

candidates were Tom Browne (Federation of Rural Workers); Brian Corcoran (Irish Transport and General Workers Union); Harry Devereux (AUEW/TASS) and Jack Molloy (Workers Union of Ireland).

The Minister has appointed the following persons to be directors of An Foras Forbartha for the period ending on

31 December 1981:

Colm O'Doherty (Chairman), Assistant Secretary, Department of the Environment; James Barry, Chartered Architect, Cork; Dr John Barry, Principal, College of Technology, Bolton Street, Dublin; Brendan Cassidy, Manager, Regions and Technical Services Division, Industrial Development Authority; John Cassidy, County Manager, Cavan; Robert Fenlon, County

Engineer, Meath; Austin Jennings, Consulting Engineer, Sligo; Noel McDonagh, Quantity Surveyor, Dublin; Timothy McEvoy, Chief Inspector of the Forest and Wildlife Service, Department of Fisheries and Forestry; John McKone, Builder, Honorary Secretary of the Construction Industry Federation; Shelley McNamara, Architect, Department of Architecture, University College,

Dublin; James O'Connor, Chief Engineering Adviser, Department of the Environment; Derry O'Donovan, Agricultural Adviser, Regional Office, Allied Irish Banks Ltd, 3 High Street, Kilkenny; Richard Stringer, Deputy Chief Adviser, Department of the Environment.

The appointment of a nominee of the Irish Congress of Trade Unions is to be settled.

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Noel Traynor has been in business for almost 50 years and it becomes quite obvious when speaking to him that he is still enjoying every minute of it. The fact that he has been joined in his own firm by four of his children probably plays a major part in maintaining the enthusiasm he still shows for the industry. He has some nice things to say about the younger generation coming into the profession though he is also critical of some of the representative bodies.

Noel, like many of his counterparts of 50 years ago, joined a contracting company straight from school as an apprentice draughtsman and furthered his knowledge by correspondence courses. He believes that he was most fortunate in his early years by having employers whom he states were "The gentlemen of their time". "I suppose I was lucky that when I first started work I came under the influence of the father of domestic heating in this country — David Glasgow of Haydens Engineering" he says. "It is vitally important for any youth, even today, when they get their first job to have the guiding influence of someone who is as dedicated to the well being of the industry as David Glasgow was in my formative years".

From Haydens he went as a consultant to the architect Vincent Kelly where he first heard the idea mooted of forming an organisation within the various departments of the building industry to oversee and protect the consumer. A spell in the Northern Ireland Civil Service was followed by a term with the Department of Health in the Republic before he joined Nicholas Mathews, and then McCanns Ltd, after which he decided to form his own Consultancy.

The greatest and one of the most important improvements he has seen over the years has been in the field of education but he is reluctant to pinpoint any one area as he explains "The profession is continuously growing and research and development are always producing new grounds for improvement which proves to me that it will always be a viable industry, even when I'm dead and gone! The basics of installation are still the same, you put in a boiler and a radiator and away you go. This is probably one of the main reasons why the 'cowboys', as we call them, make the proverbial killing."

# HN INTERVIEW

## NOEL TRAYNOR



It is the "cowboys" that Noel wants to see eliminated within the trade before he decides to call it a day. He is adamant that, if plans he and Oisin Gray, Hugh Maguire and Bob Couchman formulated some years ago to draw up a Code of Practice similar to the Building Regulations had been implemented, there would be no deaths or injuries today from boiler explosions. Strong stuff in any man's language but a claim that Noel backs up fully with the support of the three colleagues mentioned.

"Away back in 1970 the four of us got together because we were concerned then about the alarming growth of cowboys in the domestic side of the heating business" he says. The contracting side was pretty well secure against these cowboys but not so the domestic end.

Consequently, we attempted to formulate a Code of Practice that would ensure high standards and protect the public.

"We felt that the public were not being given the right advice by the 'cowboys' regarding installation and just as importantly the supply of equipment. There was nobody to call a halt to these unsavoury practices and the four of us felt that something had to be done before human lives were lost."

According to Noel, he and his three colleagues met other interested bodies in an attempt to draw up their Code of Practice. About six months into their deliberations, the IIRS approached them expressing interest and support. "Naturally we were delighted because we saw in the IIRS a reputable body that had all the facilities at hand for research and, more importantly, they were a body with weight. You could say that the four of us conceived the idea, it was six months in the womb and then through the IIRS it was aborted. They did absolutely nothing after we handed our ideas over to them and to this day they still have done nothing. However, you can be assured that my colleagues and I will be resurrecting the whole concept of a Code of Practice as soon as possible."

The oil people do not escape Noel's anger over this very contentious issue. He points out that they have a responsibility to ensure that any new domestic installation that needs fueling should be checked and approved by them

**It is no use everybody washing their hands on these boiler explosions which I know are not all oil fired boilers but, if the Code of Practice was enforced, then it would greatly reduce the dangers. After all, it is a shame that the public have to pay such prices without a built-in guarantee.**

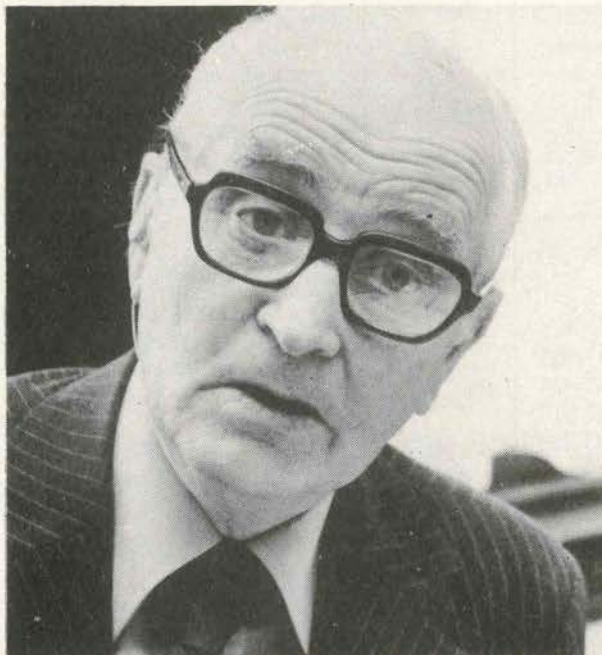


as they may be adding the torch to a potential bomb. "It is not good enough for them to counter this criticism", he says, "by stating that they only supply APPROVED dealers. Somebody somewhere is supplying fuel to the 'cowboy' trade without checking the installation. It is no use everybody washing their hands on these boiler explosions which I know are not all oil fired boilers but, if the Code of Practice was enforced, then it would greatly reduce the dangers. After all, it is a shame that the public have to pay such prices without a built-in guarantee. If we had the proper standards adhered to then when there

was an accident the public could throw the book at the 'cowboys' and have them prosecuted, something that cannot be done at the moment."

Noel admits that this is the one area of the industry that he wants to see settled before he retires. However, on a lighter vein, he sits comfortably in his chair these days with the knowledge that his son Gregg is now a full partner in the business and reluctantly admits that it was probably the most rewarding day of his life when Gregg assumed his responsibilities. "After all", Noel says, "what father doesn't want to do what is right for his children. This

*(continued overleaf)*



**Naturally we were delighted because we saw in the IIRS a reputable body that had all the facilities at hand for research and, more importantly, they were a body with weight. You could say that the four of us conceived the idea, it was six months in the womb and then through the IIRS was aborted.**



## IHVN INTERVIEW CONTINUES

is a good profession to be in. Friends are friends in the true sense of the meaning in this business".

If Noel's cup of joy was overflowing when Gregg joined the company, you can sense the headiness he must suffer today when you discover that not only has Gregg joined but so also has son Noel, who manages the site work and daughters Michaela and Ann who are draughtspersons, (I must get the wording right he laughs).

## INDUSTRIAL REVOLUTION

Noel firmly believes that the industry owes a debt of gratitude to the late Sean Lemass. "The industrial revolution in this country only took off when Sean Lemass took over the helm", he says. "Prior to his time the heating industry tended to be just hospitals and institutions but with Lemass's revolution new factories sprang up all over the country and the heating industry moved with it".

For the young people coming into the profession he believes that if they are to succeed they must be prepared to work very hard, be prepared to give a lot of their time and especially to pay great attention to detail. "There is no room for Walter Mitty's in our profession", he says. "You can't install a system and just hope that it is going to work. It must work and you must have done your homework beforehand. If I could offer a single word of advice to the new generation it would be to learn the nuts and bolts of the trade and by that I mean learn the contracting side of the business before you can really feel competent as a consultant. I believe that this criteria applies to all professions, not just our industry".

## OPTIMISM

For the future he is full of enthusiasm for the young people coming into the profession and has great faith in their ability to succeed. If Noel had it all to do again he would have liked to have been an architect for the simple reason that he thinks their profession is more creative and satisfying when one can actually see the finished work. But more importantly, like the words of the song "Je ne regrette rien".

# LITERATURE

## 'Higher Standards' for House Insulation

A 52-page report which sets out an objective case for higher standards of insulation in new houses has been recently published by Eurisol-UK, the Association of British Manufacturers of Mineral Insulating Fibres.

The report, which took over a year to prepare, takes account of the present and future energy situation against the background of existing building regulations. Improved insulation standards in the domestic sector, it says, clearly offer significant opportunities for a massive saving of the dwindling energy supply. Indeed, Eurisol-UK submit that insulation, by leading to a conservation of energy, should be considered an indigenous fuel.

In putting forward specific recommendations for the improvement of insulation standards, Eurisol-UK were aware that current UK building regulations call for roof insulation only. The result is housing stock that wastes energy, does not provide an acceptable comfort standard, and is expensive to run. As houses built today are expected to have a 60 year life, Eurisol recognised that time should be allowed for building techniques to develop to accommodate the proposed new standards. Consequently, two specific actions were recommended:

1. An immediate implementation of standards as near as possible to year 2000 requirements, recognising that these improved standards must be compatible with existing construction practices and materials.

2. In parallel with the implementation of these new standards, all disciplines within the construction industry, should be notified that new insulation standards would be introduced within seven years (1985) to bring UK housing up to year 2000 requirements.

Copies of the report are available from the Secretary General, Eurisol-UK, 64 Wilton Road, London SW 1V 1DE.

## Condensation in Attics

Eurisol-UK have also published a paper entitled "Condensation Control in Attics" which outlines the various problems associated with condensation, a subject that has for decades bedevilled both new and old buildings.

The eight-page report, written in clear, non-technical language, examines the cause and control of condensation, and shows how insulation, in conjunction with heating and ventilating, can be effectively employed to reduce the incidence or risk of the condition.

The report stresses that eaves ventilation should comply with British Standard (BS 5250:1975), and sets out overall guidance for both the builder and the householder. The well-illustrated report is available from the Secretary General, Eurisol-UK, 64 Wilton Road, London SW1V 1DE.

## Bathrooms

### Leaflet

The Council of British Ceramic Sanitaryware Manufacturers have issued a leaflet aimed at helping the public in

choosing new bathroom fittings or renovating an old system. The leaflet covers advice on planning according to the size of the bathroom, what suites and fittings to choose, the various materials used in modern products, installation, and general care of the bathroom.

Members of the CBCSM include: Armitage Shanks, Chloride Shires, Doulton Sanitaryware, Ideal-Standard, Johnston Brothers, Lotus Bathrooms, Shaws of Darwen, and Twyford. Further information: CBCSM, Federation House, Stoke on Trent ST4 2RT, England.

## IEC Booklet on Termonology

One hundred and seventy-eight terms with definitions in English, French and Russian and with their equivalent terms in Dutch, German, Italian, Polish, Spanish and Swedish comprise the latest standard issued by the International Electrotechnical Commission (IEC), the organisation responsible for the preparation of world-wide standards in the electrical and electronic fields.

Eliminating the technical barriers to world electrotechnical trade through standardisation is the principal objective of the IEC's National Committees. In assisting the electrical and electronic industries to have a common means of understanding, the IEC originated a multilingual vocabulary, the International Electrotechnical Vocabulary (I.E.V.), the latest edition comprising over 100,000 terms, which now has world-wide recognition.

Further details from the Information Officer Central Office, IEC Geneva.



# WATER TREATMENT AND CONDITIONING

## The Vital Role Played by the Consultant

An important seminar on Current Techniques in Water Treatment was held at Jury's Conference Centre, Dublin, at the end of last year. A number of papers were delivered covering the various aspects and problems of hard water faced by the heating and ventilating industry, and outlining the most up-to-date methods being used to overcome the difficulties. This month, we present an edited version of one of the papers, which was written and delivered by Mr T H Rawling B Sc.

High pressure water tube steam boilers have always required sophisticated pre-treatment plant to remove impurities from the make-up water that cannot be tolerated under high temperature and pressure operating conditions.

On steam generating plants operating at pressures in excess of 600 psig this invariably means the use of demineralisation plant and deaerators to produce a high quality feedwater.

However, on lower pressure shell boiler the picture has not always been so clear cut. Early low pressure steam boilers were of the Lancashire or low rated economic types, and these boilers could tolerate fairly poor feedwater quality due to their low heat transfer rates and steam releases rates.

**'To provide a standard of water treatment for very efficient, high rated plants, the Association of Shell Boiler Makers has produced a guide to water treatment for shell boilers'**

In very hard water areas, lime soda softening was sometimes used but in the majority of cases, these older types of boilers were treated by internal chemical conditioning, that is the hardness salts were precipitated out of the water in the boiler by chemical dosing, and the resultant sludge controlled by the use of blowdown.

However, the advanced development of the modern, high efficient and highly rated packaged economic boilers that are

meant that using the boiler as its own softening plant by internal conditioning is no longer possible. In fact the quality of feedwater that such boilers will tolerate is markedly different from the conditions that could be used on older boiler designs.

Shell boilers are available today at ratings of up to 60,000 lbs/hr and at pressures up to 350 psig. These boilers are high efficient and have high heat transfer rates, small water volumes, small steam volumes, and high steam release velocities. All these factors combined together to produce a requirement for a high standard of water treatment, particularly in the penetration plant area.

To provide a standard of water treatment for these very efficient high rated plants, the Association of Shell Boiler Makers (which includes the majority of the main United Kingdom boiler manufacturers) has produced a guide to water treatment for shell boilers.

Among the various parameters laid down for feedwater and boiler water quality, the most critical affecting the selection of pretreatment plant are:

1. Total hardness in feed: 2 ppm maximum (as  $\text{CaCO}_3$ ).
2. Total alkalinity in boiler: 1,200 ppm maximum (as  $\text{CaCO}_3$ ).
3. Total dissolved solids: 3,000 - 3,500 ppm in the boiler water.

The extremely low hardness figure permitted in the feedwater means that even in areas of relatively low raw water hardness, and where there is a high condensate return, the raw water must be pretreated to remove the hardness. The limits

for total alkalinity and total dissolved salts recommended in the boiler water both means that in areas of high raw water T.D.S. and/or alkalinity high blowdown rates must be used.

This can be very uneconomic due to the heat losses present in the blowdown, and in many cases, pretreatment to reduce alkalinity and T.D.S. may be very cost effective.

There is another impurity commonly found in boiler feedwater that presents deposit and corrosion problems in modern boilers, that is dissolved iron. This impurity usually originates as a result of condensate line corrosion and the dissolved iron subsequently precipitates in the boiler to form a deposit and can instigate further boiler corrosion.

Condensate line corrosion is normally caused by either oxygen being present in the steam or carbon dioxide being present in the steam or both.

Oxygen in steam is less of a problem nowadays where highly efficient chemical oxygen scavengers are used as part of the chemical water treatment programme. But carbon dioxide can still be a problem, particularly in areas of high bicarbonate alkalinity in the raw water, since this alkalinity breaks down to release carbon dioxide when the water is boiled.

Highly effective chemical treatment for the prevention of condensate line corrosion by carbon dioxide and oxygen are available nowadays, but in some applications it is not possible to use these chemicals on steam purity grounds. Therefore in such cases the only effective means of preventing carbon dioxide condensate corrosion is to remove the bicarbonate alkalinity from the raw water by suitable pretreatment.

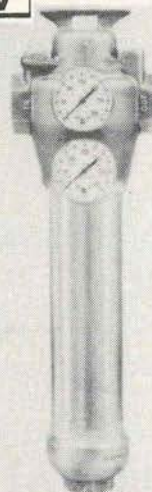
### Pretreatment Processes

The following are the main pretreatment plant processes in common use today: Filtration; Iron Removal; Base Exchange (sodium cation) softening;

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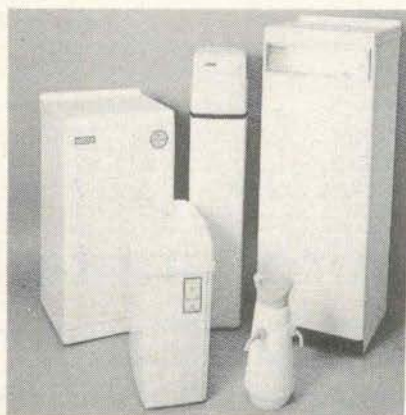
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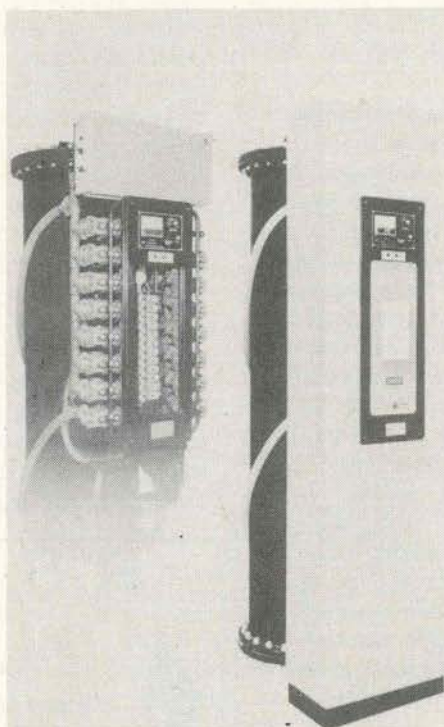
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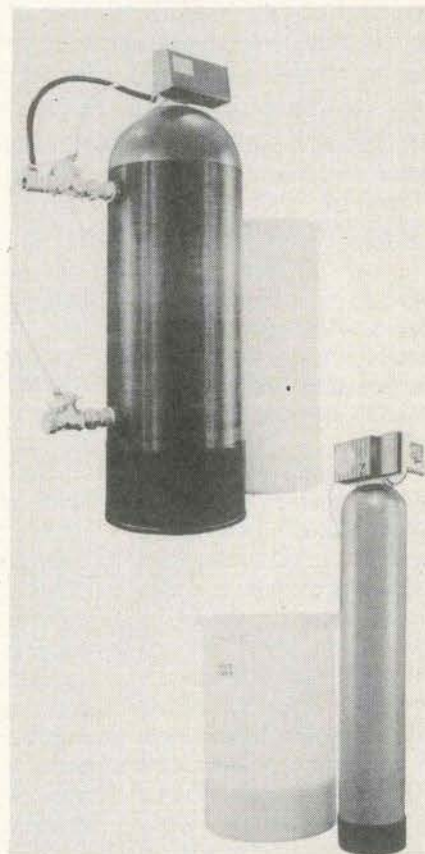
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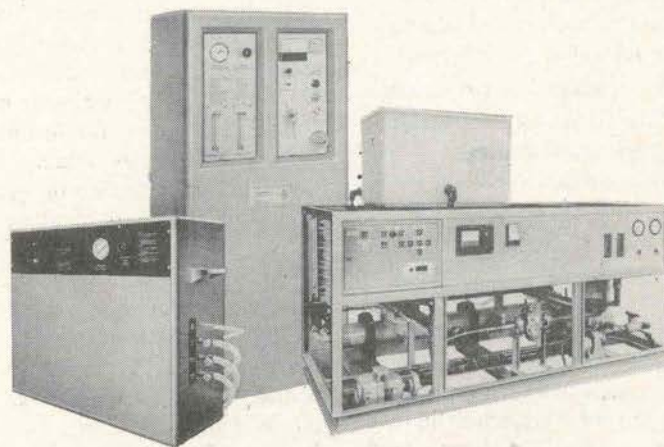
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# WATER TREATMENT AND CONDITIONING

Dealkalisation/degassing; Demineralisation; Deaeration.

**Filtration** defines itself as a process to remove suspended solids that may be present in the raw water, particularly if the raw water is from a river, lake, pond or any other water source where the water has not been pre-filtered and may contain suspended matter.

**Iron removal** can become a very necessary part of pre-treatment plant installations if the raw water contains levels of iron salts which are likely to interfere with other pretreatment plant processes. This is particularly true with respect to base exchange softeners which can become rapidly fouled by dissolved iron present in the raw water.

For levels of iron up to approximately 2.0 ppm a filter can be used with the filtration media selected to be of a type capable of absorbing iron from the water. For higher levels of iron, filters are also used but in this case the filter is normally fitted with an air blower which aerates the water as it passes

through the filter so causing the soluble iron to become insoluble and precipitate out on the filter media.

Therefore in areas where both iron and general suspended matter are a problem an auto-

**'Condensation line corrosion is normally caused by either oxygen being present in the steam or carbon dioxide being present in the steam or both'**

matic filter and air blower system can be extremely effective in protecting both the boiler and other pretreatment plant.

**Base exchange** (otherwise known as sodium cation exchange) softening is the most common pretreatment process used on boilers today, and has the advantages of being inexpensive to install and run, and is technically relatively straightforward.

This process is typical of all ion exchange processes. The

hard raw water containing calcium and magnesium salts is passed through a pressure vessel containing a bed of ion exchange resin composed of specially activated polystyrene resin beads. In the fully regenerated form, the resin is in chemical combination with a large number of sodium ions which are exchanged for the hardness ions of calcium and magnesium as the raw water passes through the softener bed. The calcium and magnesium therefore become absorbed onto the resin, and their place in the raw water is taken by the sodium, with the result that the treated water contains only sodium salts which are not scale-forming.

Normal flow in most packaged softening plants is down-flow through the bed to a collector at the bottom which allows the soft water to be removed and passed out of the softener to service.

Eventually, the softener exchanges all its sodium for calcium and magnesium and is incapable of further softening, and must be regenerated. The

regeneration process normally takes the following pattern:

The bed is backwashed by reversing the flow of water up through the bed and out of the vessel to drain, in order that any dirt that has collected on the resin may be removed, and that the resin bed may be loosened to allow for good distribution during the regeneration. This stage of the cycle usually takes about 10 minutes.

The resin is then rinsed with a solution of sodium chloride brine, which regenerates the resin due to the very high concentration of sodium ions in the brine. This reverses the softening action by causing the hardness salts to come off the

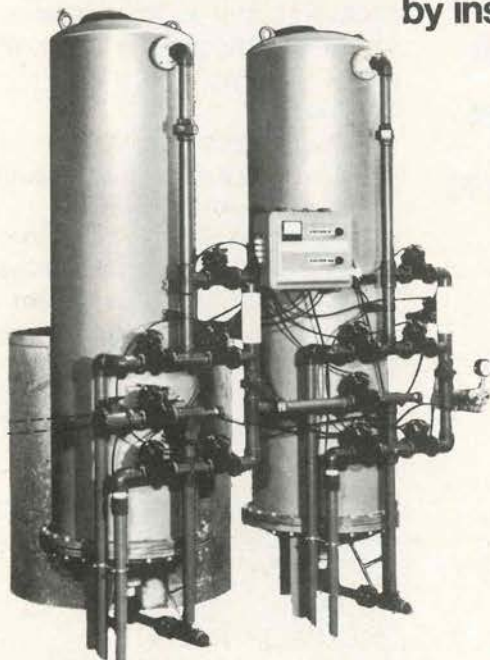
**Oxygen in steam is less of a problem nowadays where highly efficient chemical oxygen scavengers are used as part of the chemical water treatment programme'**

resin into the water, and allowing the sodium to take their place on the resin beads.

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# WATER TREATMENT AND CONDITIONING

The water containing this displaced hardness is discharged to drain leaving the resin fully saturated with sodium ions and therefore regenerated. The brine is usually admitted to the softener by drawing a saturated solution of brine from a brine storage tank into the rinse water via a venturi.

The final stage is to rinse the resin with clean water to remove any excess brine from the resin bed, and to pass this rinse water to drain. The softener is then returned to service.

The whole regeneration process normally takes approximately one hour, and is nearly always automatically controlled on modern plants. The regeneration is also normally initiated by either a time clock control, or by a water meter control system based on the quantity of water that has been softened.

**Dealkalisation** of the boiler feed is also normally an ion exchange process similar to base exchange, and in fact the equipment is very similar in operation. However, a different type of ion exchange resin is used which

is regenerated with acid instead of salt. Usually hydrochloric acid is used, but occasionally sulphuric acid is selected.

**Demineralisation** is also an ion exchange process but normally takes place in two stages in its simplest form:

First stage consists of a pressure vessel containing a cation resin capable of removing all the cations present in the water by exchanging them for hydrogen. This stage is regenerated with acid.

Second stage contains an anion resin capable of removing all the anions present in the water by exchanging them for hydroxide. This stage is regenerated with caustic soda.

The net result of the cation and anion combination process is a water containing virtually no dissolved salts which is an essential requirement for high pressure boilers. The process may seem desirable for all steam boiler plant but the capital costs are very high and the running costs also are significantly more than for other processes.

Therefore it is normally

impossible to justify demineralisation on running costs and economic grounds alone, and it is normally only installed on very high pressure steam boilers where technical consideration override economic costs.

However, the process is normally recommended for high temperature hot water heating systems where dissolved solids in the water can cause external corrosion at points of water leakage from the system.

**Deaeration** is a mechanical process which uses either

**'The net result of the cation and anion combination process is a water containing virtually no dissolved salts'**

vacuum or temperature to scrub dissolved oxygen from the feed-water. The vacuum is usually achieved by vacuum pumps or steam ejectors, and if temperature and pressure is used for deaeration, then steam is also used for this purpose.

In this process, the resin exchanges hydrogen ions for

those calcium and magnesium hardness ions which are associated with temporary or alkaline hardness in the water. The permanent hardness does not take part in the dealkalisation process.

The treated water leaving the dealkaliser therefore contains a solution of carbonic acid instead of the original temporary hardness. This carbonic acid is removed by passing the water through a degassing tower, so that the carbon dioxide content of the carbonic acid can be scrubbed out to atmosphere.

The permanent hardness still remains, but this can be removed in a small base exchange softener as described previously.

Main advantages of this process as compared with simple base exchange softening are:

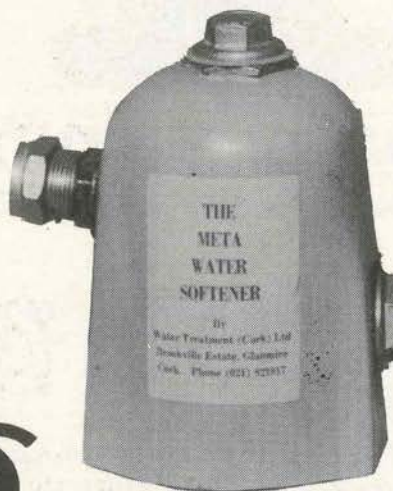
- All the bicarbonate alkalinity is removed.
- All the hardness is removed.
- The total dissolved salts content of the water is reduced by an amount equal to the alkalinity removed.

This means that, besides the

## SCALE

## SCALE

## SCALE



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WATER  
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# WATER TREATMENT AND CONDITIONING

water being soft and non scale-forming, less blowdown will be required to maintain the correct alkalinity and dissolved salts levels in the boiler water. Also there will be very little corrosion carbon dioxide in the steam.

However, the dealkalisation process has a much greater capital cost than base exchange. But in some installations the extra capital costs may be justified in savings that can be realised in terms of blowdown, blowdown heat, condensate line corrosion, and other treatment costs.

The process has a very high capital cost, and there is often a considerable running cost in steam used. Therefore it is normally uneconomic except very large high pressure installations where, for technical reasons, full deaeration is essential.

On most low and medium pressure steam boiler plants, it is sufficient to pre-heat the water to approximately 180°F in the feedwater tank, and to use oxygen scavenging chemicals to remove the small amount of

residual oxygen remaining.

## Cooling Waters

Much of what has been examined with respect to treatment plant for boilers is also applicable to cooling water systems. The main cooling water problems that can be catered for by pretreatment plant are those of scale formation and the control of suspended solids.

The most technically ideal process for pretreatment to prevent scale formation in cooling tower systems is a combination of dealkalisation and degassing, since this removes only the temporary hardness which is the main cause of scale formation in such systems. It is not necessary in this case to install a base exchange softener after the dealkalisation plant, since the permanent hardness can be tolerated in cooling water.

However, for small cooling systems, dealkalisation plant usually means an excessive capital cost not justifiable on the system. Therefore the less expensive base exchange process is often used, in which case all

the hardness is removed from the system.

Cooling systems are very prone to fouling by suspended solids and the most effective method of dealing with these is by a combination of an effective chemical antifoulant which should be dosed to the cooling water, and a side stream filter to remove the suspended debris from the system. Side stream

**'The most technically ideal process for pre-treatment to prevent scale formation in cooling tower systems is a combination of dealkalisation and degassing'**

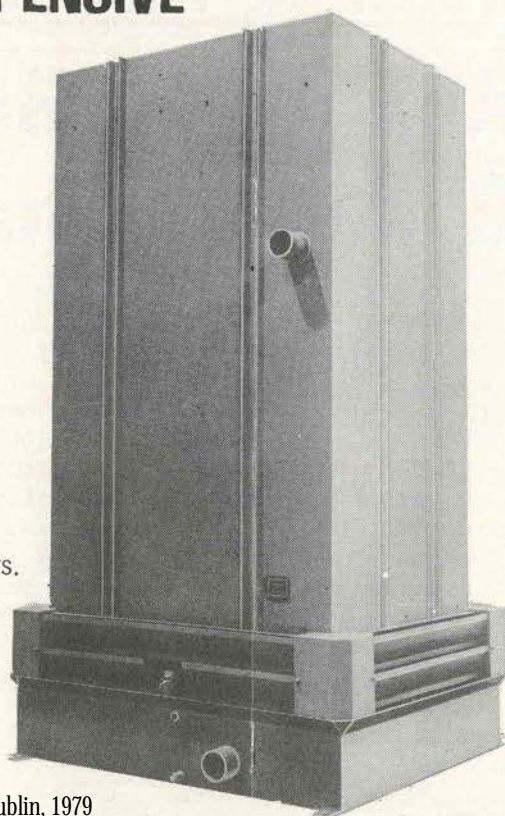
filters are piped up to the system so that they handle only a small percentage of the total system flow, but since cooling systems are normally of the recirculation type a filter that only handles 10 per cent of the main system flow can remove 90 per cent of the suspended solids in the system.

The chemical antifoulant works in conjunction with the filter to ensure that the suspended matter does not settle out before reaching the filter, and also prevents fouling by the residual 10 per cent of suspended solids that the filter cannot remove.

No treatment plant is 100 per cent efficient and therefore all the impurity cannot be completely removed. Therefore a complementary water treatment chemical programme is normally used in conjunction with the treatment plant to cater for the traces of impurity that remain after pretreatment. This combination normally provides a complete water treatment package capable of ensuring maximum protection of the water using system at overall cost and operation efficiency.

It is important to obtain the correct advice on the exact type of pretreatment process and chemical programme suited to each particular application and the most suitable source of such advice will be a water treatment consultant.

## WATER HAS BECOME VERY EXPENSIVE



"Cool tech"  
Cooling Towers.

With costs rising daily it seem ridiculous to throw away water that is costing you money, when it is not necessary.

In fact, water used for cooling in production need not cost you very much at all — by re-cycling it with a 'Cooltech' Cooling Tower, costs can be cut dramatically. Over 90 per cent savings can easily be made and capital costs can be saved in less than twelve months in most cases.

So, when it's a question of cooling towers for industries large or small, involving widely-varying processes and applications, available on dependable delivery, the answers come from Cool Technology Ltd.

Ranking high among leading manufacturers, Cool Technology's range of cooling towers starts with 'Cooltech' packaged units of approx. 8TR (30,000 K/cals) through to large, site-erected units with capacities up to 200,000 g.p.h. Custom-built units, too, in materials to suit special requirements.

And Cool Technology are not merely manufacturers of cooling towers, heat exchangers and pressure vessels but style themselves as 'problem solvers' — and would welcome your cooling problems to solve.

So, for a design-to-delivery service of the highest order; for computer-assisted calculations; advanced techniques and highest-quality workmanship — turn to Cool Technology.

For further information or technical details please contact:

**R.S. White Limited**

The Crescent, Donnybrook,  
Dublin 4. Phone: (01) 693144.

**WATER  
TREATMENT & FILTRATION SPECIALISTS.**





## FILTERS, FANS AND BLOWERS

# Top Quality Products and Service by Culligan

A H Cullen & Co. Ltd, the Irish distributor for Culligan water treatment plant offer prompt factory trained service on all Culligan products. Emphasis on this aspect, together with top quality products and technical expertise has ensured the continued growth of the Company. Through the

Culligan International Project Centre, Cullen & Co. can offer the same service, both sales and after sales service, in more than 90 countries throughout the world.

A complete range of domestic, commercial and industrial equipment is available including water softeners, potabilisation

systems, filters, de-alkalisers, de-ionisers, reverse osmosis units and chemical dosing pumps.

A continuing shortage of good "ground water" supplies present additional problems to industry. More and more users must now look for an alternative source of supply. A nearby river or lake is an obvious one. Culligan offer as a package unit a range of potabilisation plant to treat from 20M<sup>3</sup>/hour to 100M<sup>3</sup>/hour as a standard system. Multiples of this system will cater for almost any requirement. The Culligan Sauvegarde system is designed to potabilise river or lake water naturally polluted by biological impurities, organic matter and high turbidity.

Raw water is pumped through a coarse pre-filter and is injected with chlorine and a flocculation agent. It then enters a decantation tank followed by a clarification tank. The water follows a predetermined course to ensure oxidation and turbidity precipitation. It is then re-pumped through a multi-stage filter to a storage tank ready for transfer to the point of use.

A big advantage of the Culligan system is that it comes complete and can be erected on site, on a prepared concrete base, and be operational within

a few days of delivery. The decantation and clarification tanks are made of steel modules with a Trevia plastic liner, and the complete 'package' fits into a 20' container.

Full details and literature on the Sauvegarde system and all other Culligan products can be obtained from A H Cullen & Co Ltd, 1 Clonmore Road, Ballybough, Dublin 3, (Tel: 786455/786059).

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### Dufferin Cleaning Services

Dufferin Industrial Services, the long established Belfast-based company, provide a complete cleaning service to the heating, plumbing and allied industries including a full chemical cleaning and hydra blasting service and extensive experience in high pressure water washing and jetting. The Dufferin Industrial Services provide a full 32-counties service and are the main cleaning contractors to the Irish Sugar Company.

Further information: Dufferin Industrial Services Ltd., 141a Snugville Street, Belfast BT13 1NF, (Tel: 084 743388).

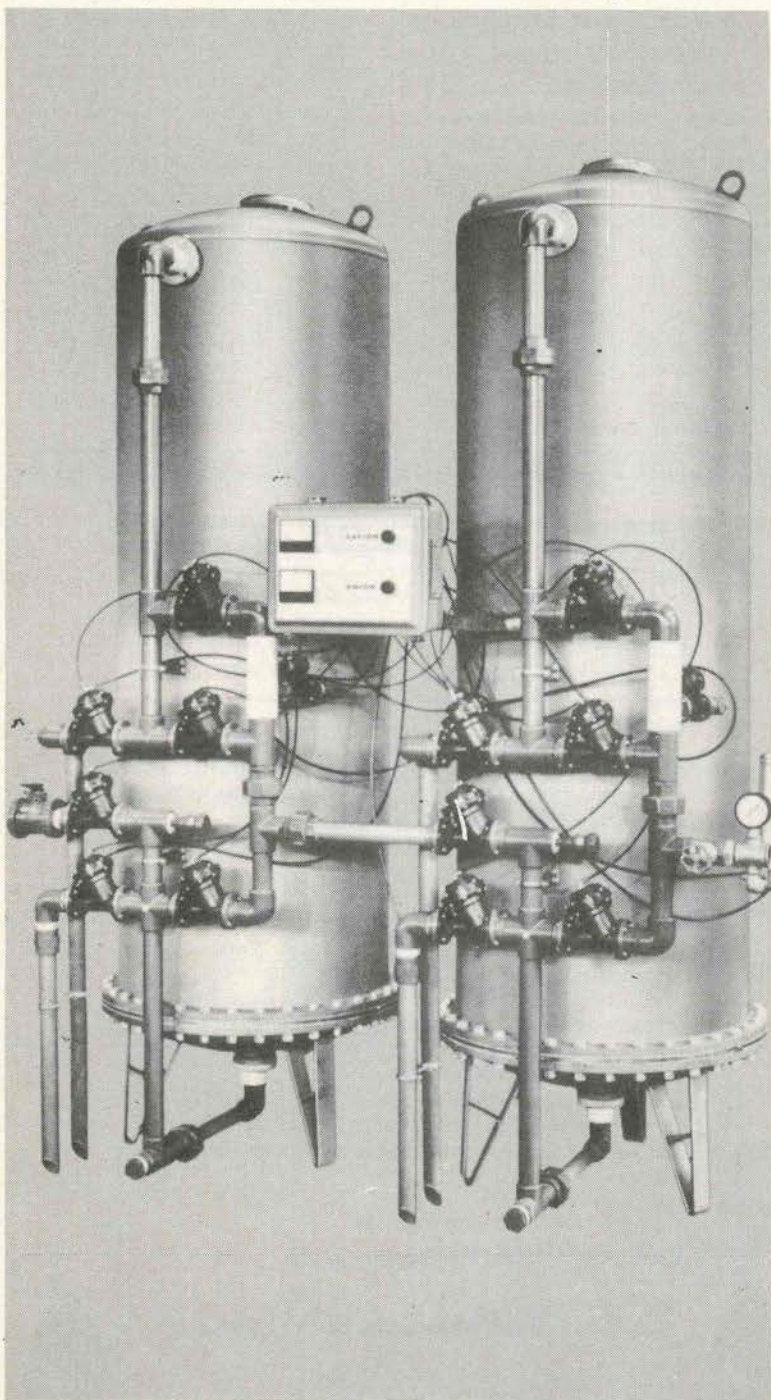
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## AES Filters Help Reduce Downtime

Albany Engineered Systems produce a wide range of tubular filters for the separation of solids from liquids under pressure, eliminating oxidation and atmospheric pollution. They provide flow rates from one to several thousand gallons per minute. The filters are cleaner to operate than open, batch or disposable media systems, and they reduce the costs of media replacement, downtime and labour. AES filters are being successfully used for such applications as cooling towers, river pond, well, chiller, gas scrubber recycle, wash, aqueous hydraulic and de-ionised water.

The range extends from single in-line filter units for installation directly in any pipe run; dual filters where continuous flow is required during shutdown for cleaning, and multiple filter banks for increased flow capability. These are available with automated cycle for back-washing with internal filtrate fluids, external cleaning agents, or gas purge methods. A wide variety of filter media is available for any of these units.

Further information: R S White Ltd, The Crescent, Donnybrook, Dublin 4, (Tel: 693144).





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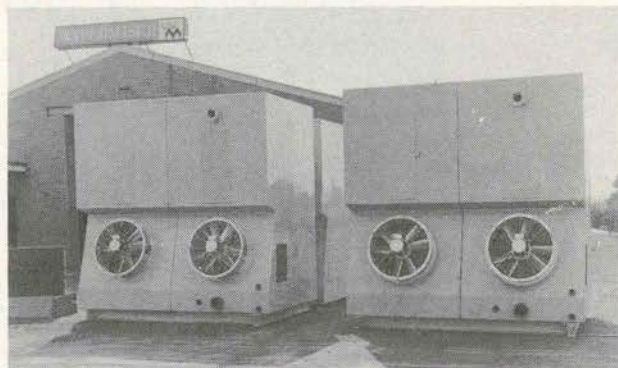
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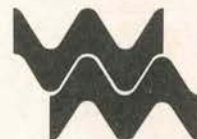
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# WATER TREATMENT AND CONDITIONING

## Equipment for Every Application from R.S. White

R S White is probably one of the oldest companies in Ireland dealing with water treatment generally, having represented "Permutit" since the company was founded in 1932. Since then they have supplied "Permutit" equipment for nearly every application. This includes domestic softeners up to comprehensive water treatment for industrial steam boilers for all industry.

### CAPABILITIES

They also supply many industries which require a particular water quality such as dairy industry, soft drinks manufacturers, power stations, breweries, electronic components, pharmaceuticals, cosmetics, etc.

Houseman (Burnham) Ltd and Permutit Bobby Ltd are members of the Portals Water Treatment Group of companies specialising in every aspect of water, sewage, effluent and process liquid treatment. Activities and products range from standardised treatment plant and water conditioning chemicals to total treatment engineering covering the conservation of water and its economic use from supply and discharge of final effluent.

R S White Ltd can supply a complete range of packaged equipment i.e. filters, softeners, de-ionisers, dealkalisation plants, reverse osmosis units and these have been used for such applications as renal dialysis in hospitals, treatment of water for whey utilisation, and during process industry applications.

A recent development of Houseman (Burnham) Ltd has been the introduction of a range of standardised twin bed deionisers capable of flow rates from 0 - 4400 gallons per hour with an internal re-circulation system capable of producing a water quality of 1 megohm/cm.

For domestic purposes there is a range of water softeners and filters to suit households of one person up to small hotels and guest houses. The need for water treatment for domestic use is constantly increasing due to more households installing washing machines, dishwashers, shower units, etc. and the damage that can occur, due to lime build up, more than justifies the capital outlay.

### MINERAL ANALYSIS

The treatment of any water will depend on the chemical analysis and site conditions in each individual case. If these are not readily available, R S White Ltd can carry out a full mineral analysis and site survey

and their representatives will be pleased to discuss and advise on every aspect of water treatment.

### LONG EXPERIENCE

"Permutit" Service is a self-contained division of Permutit Bobby Ltd. It has the benefit of the company's long experience in design, construction and installation of water treatment plant as well as specialised knowledge of the operation and maintenance of plant after installation. There is a Permutit trained service engineer resident in Ireland and spare parts are stocked at R S White Ltd.

Houseman (Burnham) Ltd and Permutit Bobby Ltd are represented in Ireland by White Ltd who have the support and backing of the total commercial and technical resources of Portals Water Treatment Group. For technical literature or further information on water treatment contact R S White Ltd, The Crescent, Donnybrook, Dublin 4, (Tel: (01) 693144).

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Industrial Services  
provide a complete  
**CLEANING SERVICE**  
to Industry.

**DUFFERIN** carry out  
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**Telephone: Belfast 743388.**



# Tailor Made Towers from Watermiser

Despite our relatively wet climate, water is not plentiful, and with the ever increasing demand by industry and commerce here in Ireland, it makes economic sense to re-cycle water whenever possible.

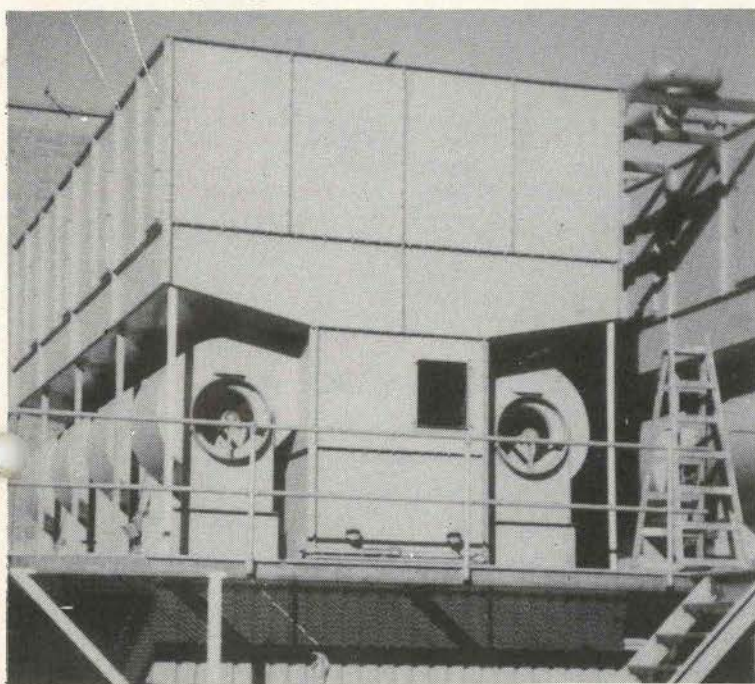
Watermiser Ltd, manufacturers of open and closed circuit cooling towers, claim that they have helped many Irish companies to save both water and money. They also claim that they have as wide a range of towers as any other manufacturer in Europe, and one of their main assets, is their ability to 'tailor make' towers to a client's requirements.

An example of this is the Watermiser installation at a creamery in Ballyclough. Space

order to conserve space, the fans were 'tucked in', as shown in the accompanying photograph.

The choice of materials in the construction of an evaporating cooling tower is important, and whilst mild steel is used for very large towers, Watermiser standardise on Glass Reinforced Plastic for all packaged units. Eight standard sizes are available, each fitted with axial flow, or centrifugal fan.

In addition to supplying and installing cooling towers, Watermiser are also called upon to refurbish existing towers, often resulting in improved performance. A team of expert engineers are always available to carry out this type of work.



*The Watermiser installation at the creamery in Ballyclough.*

was so restricted that it became necessary to locate the towers literally over the River Blackwater. This was achieved by spanning the river with steelwork, and locating the pump house below the towers which were sited on purpose made platforms. Due to the rural location, noise was a major consideration, and Watermiser advised their client that slow speed centrifugal fans should be used, each of these individually driven by TEEC motors. In

Watermiser claim that being located in the West of Scotland, communication with Ireland is as good, if not better, than from any other part of the UK. With excellent air and sea service, they can be on site within twenty-four hours of any request.

Further details available from Watermiser Ltd, Tower Works, Stonygate Road, Newmilns, Ayrshire TA16 9AJ, Scotland. (Tel: STD 0560 20762).

# RIDGID®

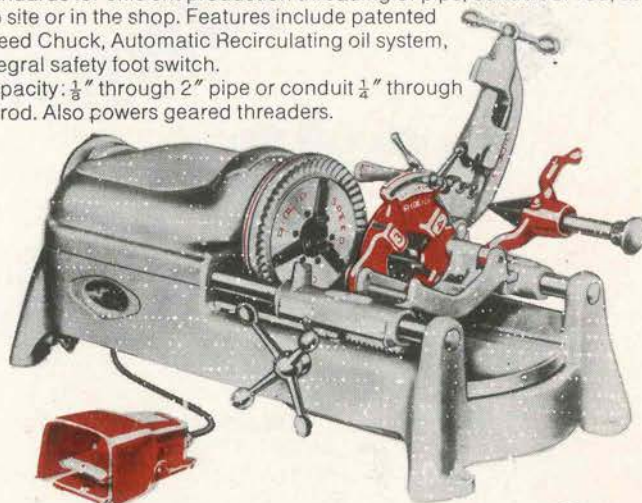
## The best double act in the business.

Two great performers from the Ridgid Work Saver Range – the RIDGID 300 and RIDGID 535.

When there's cutting, threading and reaming to be done, these tough, fast-working money savers will happily tackle all you've got to give them. And these days you'll find them very price competitive too. So go for the best. Ask for Ridgid.

### RIDGID 535

**Pipe and Bolt Threading Machine.** Built to famous RIDGID quality standards for efficient production threading of pipe, conduit or rod, at the job site or in the shop. Features include patented Speed Chuck, Automatic Recirculating oil system, integral safety foot switch. Capacity:  $\frac{1}{8}$ " through 2" pipe or conduit  $\frac{1}{4}$ " through 2" rod. Also powers geared threaders.



### RIDGID 300

**Power Drive** with patented Speed Chuck provides lightweight portable pipe, conduit and rod working capability through 2". Heavy duty motor, recessed reversible switch and integral safety foot switch. Equipped with low-cost RIDGID accessories (Carriage Cutter, Reamer and Die Head), it offers you complete threading machine, speed and ease. Full capacity  $\frac{1}{8}$ " through 2" pipe and  $\frac{1}{4}$ " through 2" rod. Up to 6" pipe using RIDGID Geared Threaders and Close-Coupled Drive.



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# RIDGID®

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If Ireland's leading air conditioning and refrigeration specialist decided to move into fluid handling, you'd expect the pumps to be good.

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# NORTHERN ↑ IRELAND REVIEW

The recent amalgamation of the Chartered Institute of Building Services and the Institution of Illuminating Engineers resulted in their holding their first joint annual dinner in the Culloden Hotel when over 150 members and guests sat down under the chairmanship of Mr. S. Andrews.

Chief guest was the Lord Mayor of Belfast, Alderman Cooke who spoke along with the President of the CIBS., Mr. L. Hadley.

Other speakers included Mr. N. Fieldhouse of the I.I.E. and the secretary of the Southern branch of the CIBS, Mr. P. Clonan.

In the afternoon the Lord Mayor received Mr Andrews, Mr Hadley and Mr Ferguson (N.I. vice chairman) in his chambers.

Mr. J. McVicker of McNaughton Blair Ltd welcomed a number of their heating and plumbing customers to a trade evening they had organised in conjunction with Danfoss Ltd.

During the evening Mr Bob Graham of Danfoss gave a talk on controls with, naturally, special reference to the Danfoss range of thermostatic valves.

Mr John McClelland of McNaughton Blair gave details of the special promotion scheme which was being launched before the guests returned to the buffet.

Could Northern Ireland be on the brink of an energy breakthrough? There have been over the past few years various rumours about either gas or oil being off the coast, but as yet there has been no official confirmation or denial.

Now we have the announcement that a Canadian company is about to investigate the coal seams in the Coalesland area. There is no doubt that there is coal in the area, as many years ago John Kelly Ltd attempted to open a mine there, but had to give up due to serious flooding.

However technology in pumping has improved as have mining techniques since the earling borings. The general quality of the coal which has been produced in the area to date has not been particularly good but, however, the whole fuel situation has



At the Annual Dinner of the N.I. Branch of the C.I.B.S. were (from left): D. Stothers; F. Hadley, President C.I.B.S.; S. Andrews, Chairman N.I. C.I.B.S.; and A. Barnes, President R.S.U.A.

changed and deposits of coal and oil formerly considered non-commercial are now being looked at in a different context.

There are also deposits of coal in North Antrim and North Down to be investigated and if these would prove commercial and uranium was found in Fintona, who knows, we may have in a few years time a few Ulster Sheikhs!

The situation is such that many contractors are having to lay off men due to the lack of supplies. Some imported copper is finding its way into the market but the price and quantity is doing little to ease the situation.

The only solution appears to be "wait and see".

Last month we referred to the shortage of copper pipe throughout Ulster and this situation has now been further aggravated by a strike and the works of one of the major distributors.

Following their success at the Dublin Building Materials Exhibition, when practically £1 million worth of business was obtained, Hall Condon (International) Ltd who manufacture Diesel electrical generators and switchgear at the Newry Greenbank



W. Liddell (McAuslan & Partners); D. Isherwood (Isherwood & Boyd); F. Cogan (Cogan & Sharcrelton); and T. Boyd (Esso) pictured at the Institute of Fuel meeting.



Industrial Estate have now turned their attention to the Middle East and Africa.

Recently sets have been exported to the Persian Gulf and the Yemem and there are possibilities of further orders being obtained from Turkey.

Atkins Houston Partnerships, mechanical and electrical consulting engineers have commenced practice at 56 Main Street, Bangor Co. Down.

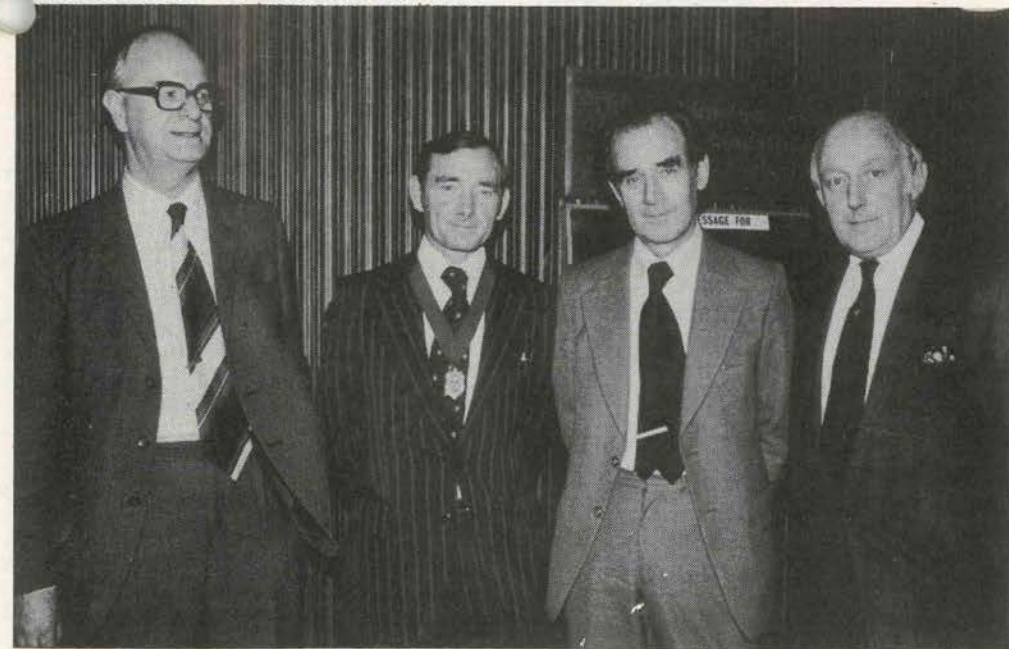
Cool Heat Ltd (managing director Barry Shaw) who represent a number of heating and ventilating equipment manufacturers are now operating from 16 Railway Street, Lisburn.

Ferguson Industrial Holdings Group with major interests in Northern Ireland in the form of Heating Controls & Devices Ltd and Stevenson & Turner Ltd have now acquired one of the oldest builders merchants W. D. Henderson & Sons Ltd.

The new chairman of W. D.'s is Robert Hutchinson, who will also act as managing director. Mr Noel Wright will continue as general manager and director and joining the board from Ferguson Holdings will be Mr D. S. Vernon.

This acquisition now means that the Ferguson Group, through their various interests and companies, are in a position to supply the builder or plumbing contractor with practically a complete service of their needs.

George Clark & N.E.M. Ltd, of Wallsend, manufacturers of the Maxecon and West-



Attending the Institute of Fuel (N.I.) meeting on energy conservation grants were: T. Caruth (Dept. of Commerce); C. Monaghan (Chairman); R. Willis (Dept. of Energy); and F. R. McBride (Honorary Secretary).



R. Jordan (Esso); J. Mladek (Crepe Weavers); J. Bell (G.E.C.); S. Dickson (Department of Commerce); and T. Caruth (Department of Commerce) who were also at the Conservation meeting.

garth range of steam and hot water boilers have appointed IES Industrial (Ireland) Ltd of 81 Rosetta Road, Belfast, as their Northern Ireland agents.

With the acquisition of this agency, I.E.S. are now in the position to offer practically a complete boiler plant, as they already represent major and internationally known manufacturers of pumps, instruments and other boiler house equipment.

The Maxecon boiler is a long established unit and there are already a number of such installations throughout Ireland.

The boiler is of three pass multitubular fully wet back construction with a patented configuration of the combustion chamber and disposition of the tube nests.

The manufacturers claim that the dis-

position of the tubes ensures no hot spots, good circulation and high heat transfer. The boiler is extremely flexible, has ample water coverage and the generous steam space enables quick response to load changes.

The boiler, depending on the required output, may be single or double furnace and the design of the latter is such that the boiler may operate efficiently on one furnace only, thus giving a generous turn down feature.

Standard models may be oil or gas fired with pressure up to 250 psig. with outputs from 10,000 to 65,000 lb/hour.

Companion to, and built to the same high specification, George Clark & N.E.M. manufacture the Westgarth range, operating up to 150 lb./Sq. in. with an output range between 6 - 35,000 lb/hour.

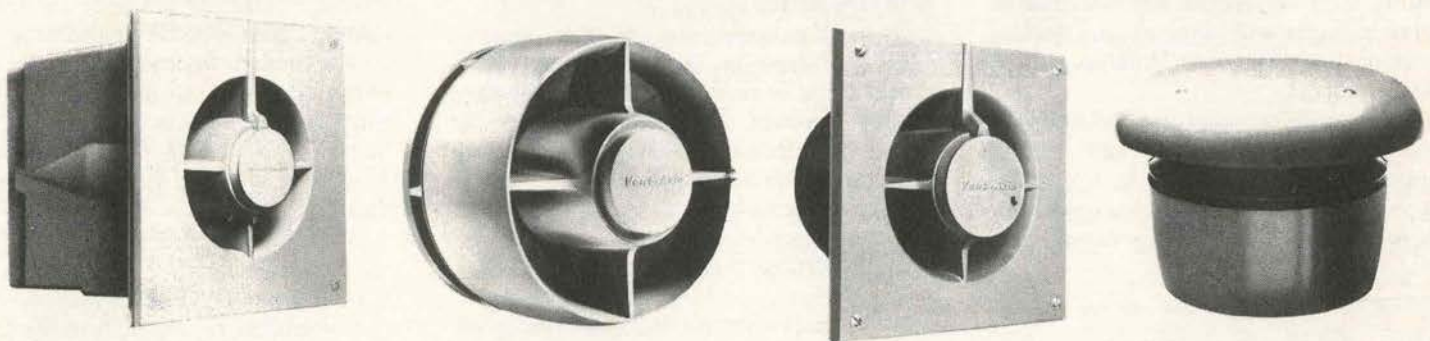
IES will also be handling this range, thus giving the client a wide range of choice. Both types are supplied on a cradle complete with pumps, controls, combustion equipment and all necessary ancillary equipment, manufactured by one of the oldest engineering companies in the UK the Maxecon and Westgarth have no connection with any other boiler or boiler manufacturer.

In effort to support increased sales in Northern Ireland, combustion equipment manufacturer, British Gas and Oil Burners Ltd, have appointed DBM Ltd, of Belfast as the major distributor for burners and spare parts.

DBM has agreed not only to provide the much needed sales and spare parts outlet, but also a comprehensive back-up service for any Selectos users in Northern Ireland be they OEM, installer or private customer.



# Universal peace of mind



Every time you choose a Vent-Axia Universal ventilation unit, you're getting much more than effective ventilation.

Peace of mind.

Because Vent-Axia units are built to last. Vent-Axia ventilation simply keeps going reliably, uncomplainingly, day after day, year after year. (Many units installed up to 30 years ago are still giving peak performance.)

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Quite simply, the finest in unit ventilation. Four models (window, wall, roof and panel) in four sizes (6, 7, 9 and 12) — all with the exclusive Vent-Axia Autospring automatic shutter.



# Vent-Axia®

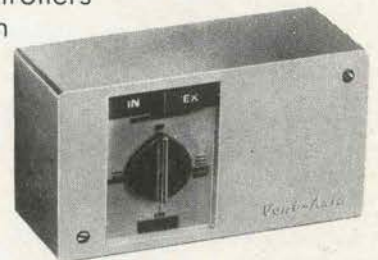
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## New Rangemaster controllers

Now it's even easier to make full use of Vent-Axia's superb performance capabilities.

Because Rangemaster controllers

(designed for use with both Universal and Standard units) offer three speeds, extract or intake and a choice of flush-fitting or surface mounting.



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## FILTERS, FANS AND BLOWERS

# Filters for High Efficiency Filtration Systems

The Filter Division of Luwa (UK) Ltd, part of the Zurich-based Luwa Group, supplies a wide range of high efficiency ultrafilters, and specialised clean room components.

Luwa FP filters are suitable

filters need to be changed, the holding frames are retained and only the filter cartridges are replaced. These filters have an efficiency of 92 per cent by sodium flame test, and are available in two depths (290

the V cell is the opposite — shallow with a large face area. Both cells are available in five qualities with separation efficiencies from 80 per cent to 99.995 per cent by sodium flame test. The main features of both these filters is their low space requirement.

Luwa N ultrafilters are made up of V-elements housed in a standard casing 609 x 292 mm N-3, N-4 and N-6 cells (denoting the number of V-elements in each) are available in various efficiencies up to 99.995 per cent by sodium flame test. The N-6 cell will handle up to 2,000 cfm.

Luwa P, PL and RR ultrafilters are panel filters of varying dimensions suitable for installation in clean rooms up to Class 100 (US Federal Std. 209b).

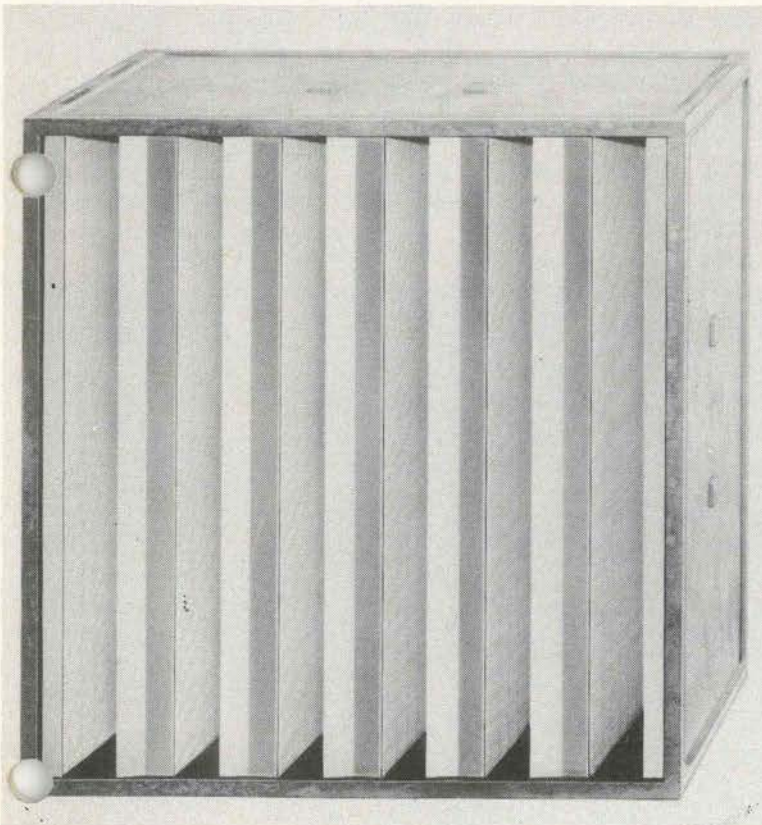
Specialised equipment supplied by Luwa includes: The Luwa Filtrasept sterile air diffuser, with integral PL or RR

filter, which is available in five sizes; The Luwa UR ultrafilter frame system, which allows RR, PL and N cells to be combined to form a filter wall or ceiling; The Luwa SLE sterile air unit which, in conjunction with the CG air distributor screen, provides localised laminar flow clean air. Static or mobile versions are available; Luwa JK glove box filters.

Further information: Luwa (UK) Ltd., 36/41 High Street, South Norwood, London SE 25 6 HG, (Tel: 653 6516).

## Wide Range from Dan Chambers

A comprehensive selection of ventilation equipment is available for all applications and a large variety of roof fans, wall fans, axial fans and centrifugal fans can be obtained ex-stock.



Luwa FP cartridge filter.

for use in ventilation and air conditioning systems where high efficiency filtration is required. They are made up of self-supporting V-elements with glass fibre media and can be supplied as 'cartridge' units which fit conventional 610 x 610 x 305mm filter frames.

With this system, when the

and 400 mm) with approximate capacities of 3,800 m<sup>3</sup>/h and 5,000 m<sup>3</sup>/h respectively, and clean p.d. of 14mm WG at these capacities.

Luwa PB and V ultrafilters can be supplied in housings to fit any air conditioning system. The PB filter is a deep filter with a small face area, whilst

## S&C DISTRIBUTORS (IRELAND) LTD

Sole Irish Agents for **WOODS** of Colchester.



LP Roof Extract Unit

**KEITH BLACKMAN**

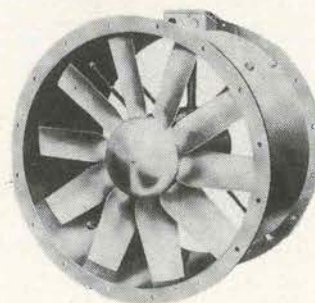
**Xpelair**

**Claudgen**

**REDRING**

Range of Heating and Ventilating Equipment.

HEAD OFFICE: Hendrick St., Dublin 7. Tel: 775413/787377. Branches at Cork, Limerick, Galway, Dundalk.



Aerfoil Fans

**Turbo Dynamics Limited**

air and gas handling engineers.

MANUFACTURERS OF:

CENTRIFUGAL FANS, AXIAL FANS,

AND HIGH PRESSURE BLOWERS.





## FILTERS, FANS AND BLOWERS

Principal products include those manufactured by Roof Units Ltd, Novenco, Ziehl-Abegg and Marcal Plastic Fans Ltd.

The wide range of centrifugal, axial and twin roof units with matching roof soaker sheets to suit almost every corrugated roof profile and regulatable motors, from Roof Units Ltd, meet the demands for most specifications. They also manufacture vertical jet roof fans which are ideal where the exhaust must be kept away from high level inlets or windows.

Novenco make aerofoil fans, centrifugal fans (250mm to 1000mm), heating coils, unit heaters and air handling units. Their ever-increasing share of the centrifugal fan market has shown that quality products, keenly priced with good del-

ivery, are always in demand. Their excellent catalogues can be obtained on request.

The revolutionary external rotor motor is fitted to all Ziehl-Abegg fans and it shows its benefits in the slim compact design of their products. The motor needs no maintenance and is vibration free with low sound level. It is fully regulatable in both single and three phase and the price is very attractive too.

To complete their range, Dan Chambers Ltd offer PVC fans, PVC fume scrubbers and PVC roof units from Marcal Fans Ltd, for installation where resistance to corrosion from acids and alkalis is required.

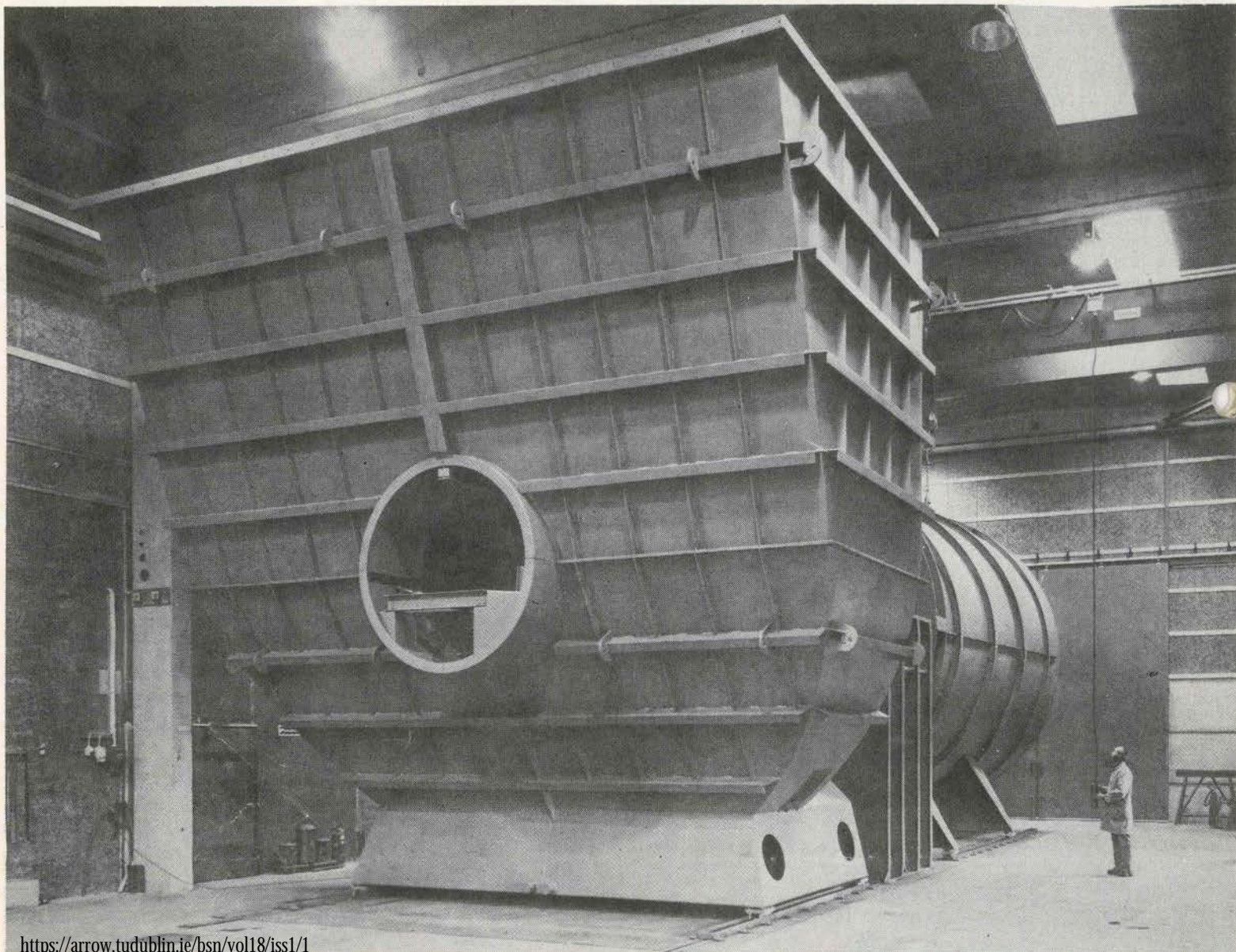
Further information: Dan Chambers Ltd, 3 Echlin Street, off James's Street, Dublin 8, (Tel: 720448/784953.

## Three Ranges from Vent-Axia

Vent-Axia ventilation is now available in three ranges: the Vent-Axia 150, a new unit specifically designed for modern kitchens, bathrooms, and utility rooms; the Vent-Axia Universal Range, which as the name implies, is designed to cover all applications and needs in unit ventilation; and the Standard Range, which comprises a number of window, roof, wall and panel models.

The firm also produce a

varied range of Approved and Additional Accessories (AVA) which includes: roof plate assemblies, top and side entry ceiling housings, soaker flanges for corrugated roofs, single spigot plates and boxes for through ceiling ventilation, multi-spigot plates for multi-duct systems, terminal connectors, cone connectors, adapt kits, wall fixing plates, grilles, and variable transformers for speed control of bank units.





# Just 6 of the many good reasons for dealing with Walker for air conditioning & refrigeration plant

**1**

We supply Carlyle equipment, the air conditioning and refrigeration world leader both in product and system choice as well as quality.

**2**

Whilst competitors have mushroomed and collapsed month by month, we have grown year by year since 1964 as Carlyle's sole distributor in Ireland.

**3**

We have the largest team of service engineers in the industry by far.

**4**

We have more stocks of spares and equipment in Dublin than all our competitors hold between them.

**5**

Our staff have over a million manhours of air conditioning engineering expertise between them.

**6**

And last, but by no means least, we are backed by the massive Jefferson Smurfit Group. Your guarantee of stability.



## Walker Air Conditioning

Dublin Industrial Estate, Finglas Road, Dublin 11 Tel: Dublin 300844 Telex: 4862

9a Cherryhill Road, Dundonald, Belfast BT16 0JH Tel: Dundonald 5235

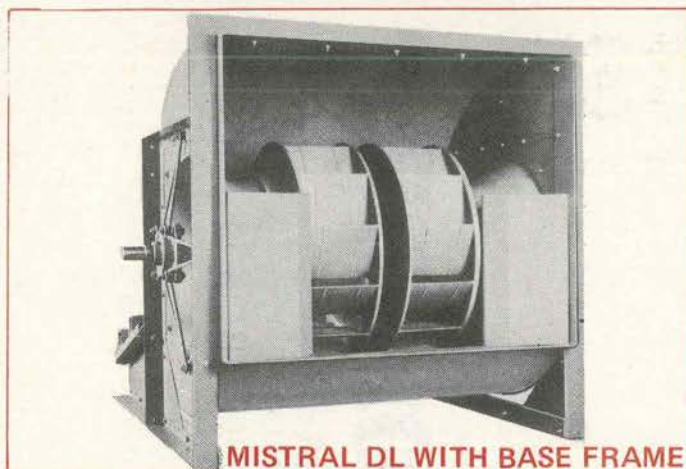
136 Strathmore Road, Balmore Industrial Estate, Glasgow G22 7TA Tel: Glasgow (041) 336 4327 Telex: 779406



the air conditioning leader

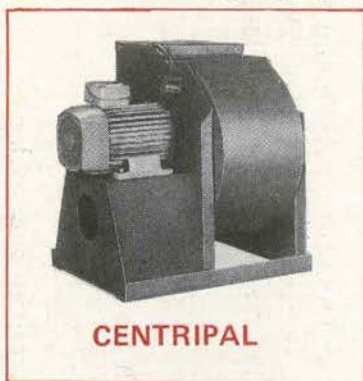


## A Complete Range of Fans from **HEVAC** Manufactured by Solyvent-Ventec



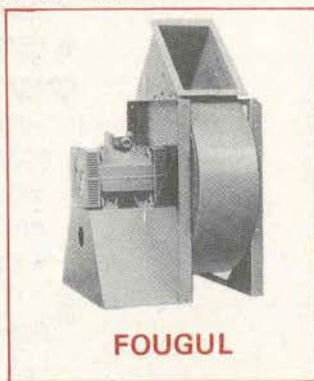
**MISTRAL DL WITH BASE FRAME**

Capacity up to 150,000 m<sup>3</sup>/h  
pressure up to 250 mm WG



**CENTRIPAL**

Up to 200,000 m<sup>3</sup>/h  
at 700 mm pressure



**FOUGUL**

Capacity up to 40,000 m<sup>3</sup>/h  
up to 3,000 mm pressure



**AXIPAL BELTDRIVE/AXIPAL STANDARD**

Up to 150,000 m<sup>3</sup>/h  
at 140 mm WG pressure

Solyvent Ventec manufacture the finest range of fans in Europe to cover every conceivable application — Cement Manufacturing, Metallurgy, Shipbuilding, Chemical Engineering, Furnaces, Air Conditioning, Railways, Surface Treatment and Electrical Power Stations



Further information from

**Hevac Limited**  
Heating Ventilating and Air Conditioning

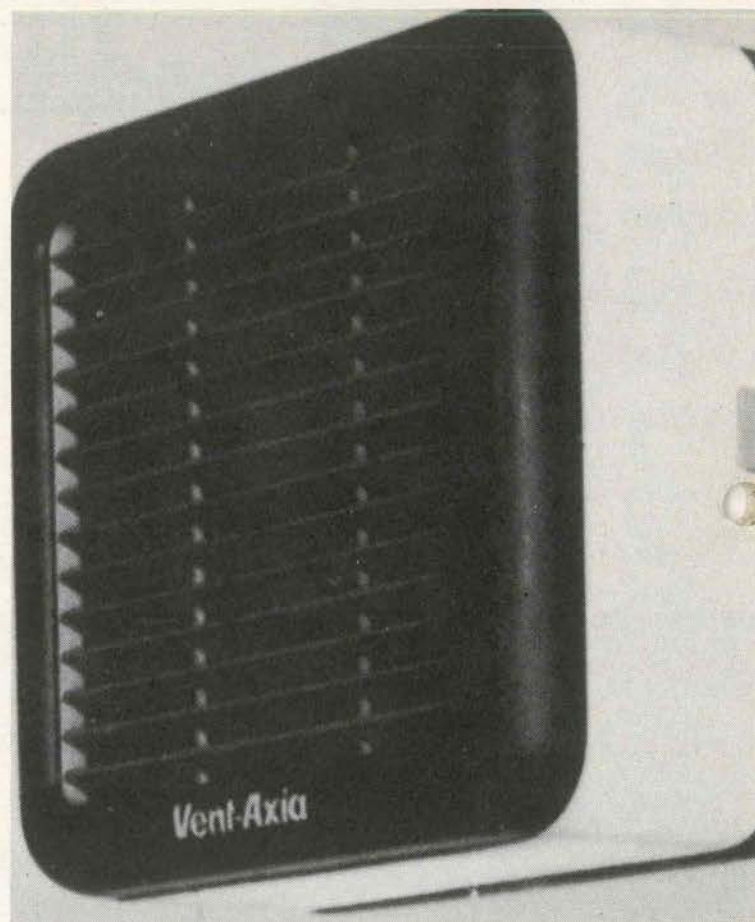
Head Office: 10, Lifford Avenue, Fairview, Dublin 3.  
Tel: 01-491 3796/374646 Telex: 5827 Gramis: Hevac.

## FILTERS, FANS AND BLOWERS

They also supply flexible ducting from 4 to 16 ins diameter, filters in various sizes and to suit various applications, grease eliminators for commer-

are steamproof, acid resistant, and light excluding for use in darkrooms.

Additionally, control systems to meet most specifications can



*The new Vent-Axia 150.*

cial kitchens, fire dampers of different constructions, and air filters to provide filtered intake for window units.

Another feature of the Vent-Axia range is the specialist models, providing units which

be supplied for use with Universal and Standard Range units.

Further information: Armstrong Autoparts, Camac Close, Emmet Road, Inchicore, Dublin 8, (Tel: 781700).

## Advanced Feature from Loovent

Aidelle produce an attractive range of bathroom and toilet extractor units, the Loovent range, which have a number of useful advanced features.

Model 01 is a single fan with timer, wired to existing light switch or separate door switch. This model is designed for internal toilets and starts to extract when switched on. When the light is switched off, or the door switch is de-

energised, the timer mechanism controls the fan so that it continues to run (for a pre-set period of approximately 20 minutes) before automatically switching off).

Model 02/2S, a single fan with 2-speed operation and continuous operation, runs continuously at the low speed and is switched to high-speed operation by means of the existing light switch or separate



# FILTERS, FANS AND BLOWERS

door switch.

Model 03 is manually operated by the on/off pull-cord switch. The neon indicator is lit while the unit is running.

Model 06 is manually activated by a single operation of the pull-cord switch. The fan starts, runs (via a timer mechanism) for a pre-set period of approximately 20 minutes and then switches off automatically.

Model 004 has two fans (mains and stand-by) with automatic change-over mechanism and neon indicator (continuous operation). In the event of a main fan failure, the stand-by fan is automatically switched into operation. It is capable of extraction from an adjoining room.

Model 005 has two fans (main and stand-by) with automatic changeover mechanism, neon indicator and timer-wired to existing light switch or separate door switch. Operation exactly as model 01, but in the event of main fan failure the stand-by fan is automatically switched into operation.

Model 07 is a single fan with

neon indicator and timer-wired to existing light switch or separate door switch. Operation exactly as model 01, but the indicator is lit while the unit is running.

Accessories include: Window kit, available to enable models 01, 02/2S, 03 and 06 to be fitted into a window. Grille, to complete your Loovent installation an external wall grille should be fitted. Door Switch:

An unobtrusive component supplied in white plastic. Capable of switching mains voltage at a current rating of 5A. Grille and Adaptor: For the adjoining room, a 100mm (4") grill in white plastic and a 50mm (2") to 100mm (4") adaptor.

Further information: McKenna Distributors Ltd, 2 Aston's Quay, Dublin 2, (Tel: 773132).

ever popular GP propeller fan is available ex stock from 250 mm diameter to 800 mm all regulatable (manual or electronically).

Keith Blackman Ltd offer a large selection of quality centrifugal fans with direct or indirect drive available in SISW or DIDW, dust collection units and a range of bifurcated fans capable of operating in a temperature of 320°C.

Xpelair fans offer a whole range of controlled ventilation that makes living and working a fresher and cleaner business. Their range of window, wall and roof mounted fans are available in 6" 9" and 12" diameters. The 9" and 12" Models are available with controllers and now available is a group control unit to handle 6 x 9" fans or 4 x 12" fans. Also available in the range ceiling fans, toilet fans with timers and cooker hoods.

Further information on the complete range of equipment is available from GEC Distributors (Ireland) Ltd, 15/19, Hendrick Street, Dublin 7, (Tel: 775413).

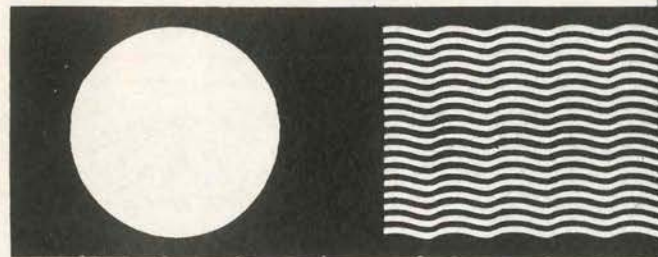
## 'Total Capability' from GEC Distributors

GEC Distributors (Ireland) Ltd handle a wide range of industrial and domestic equipment in the heating and ventilating field. Principal products are those manufactured by Woods of Colchester Ltd; Keith Blackman Ltd; Xpelair Ltd; Claudgen Ltd and Redring Ltd.

Total capability is the Woods

of Colchester theme and G.E.C. Distributors can boast the same with the comprehensive stock of their products including regulatable axial aerofoil fans, 150 mm to 800 mm; fume cupboard fans; roof units — galvanised and fibre glass, curb and purlin mounted and now available with soaker sheets. The

# EUROPAIR



**Centrifugal**  
forward curved  
single & double inlet  
Class 1 & 2  
200 to 50,000 CFM.



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3 Ardee Rd.,  
Rathmines.  
Dublin 6.  
Telex 5754.



# FILTERS, FANS AND BLOWERS

## Vokes

Vokes filters are tried and tested in thousands of different applications all over the world, from general air conditioning ventilation to the critical requirements of hospital operating theatres, and medical research laboratories. There are Vokes filters that can withstand extremes of temperature, humidity, air pressure, and the effects of chemical attack from fumes and gases. There are even filters which can handle radioactive dust.

All Vokes filters are available in a wide range of types, sizes, and efficiencies, so you get the optimum unit for your installation. This ability to match precisely the efficiency, dust holding capacity, and air flow required by your installation ensures the system will be truly cost effective.

Rigorous quality control during filter manufacture ensures that all products meet the standards required by the leading authorities.

Vokes make all their own filter media, so you get prompt availability and a consistent product. There is no cheap substitute for media specifically developed for filtration purposes. An exceptionally comprehensive range of filter refills and spares, which even includes filters for equipment of different manufacture, is readily available with large stocks held in Walker's Dublin warehouse.

The latest offering from the Walkers/Vokes stable are the V glass soil and strip paint arrestors, which are available in pad or service rolls.

Full details are available from Alan O'Connell at Walker Air Conditioning Ltd, Dublin Industrial Estate, Finglas Road, Dublin 11, (Tel: 300844).

## HEVAC

Hevac Ltd are the sole distributors of Solyvent Ventec fans in the Republic of Ireland. At Solyvents' technical centre research engineers using the

most modern equipment, develop the fans of the future.

Solyvent build over 150 axial flow fans per day, from 300 mm in diameter to 2,500 mm in diameter. The range includes 19 wheel diameters with three, six, nine or twelve blades, and four drive speeds from 720 RPM to 2,900 RPM. There are six mounting positions with direct drive or external motor with belt drive, and tubular or bellmouthed housing.

Solyvent also manufacture centrifugal fans for all industrial applications.

Special fans for the following industries are also available:— cement manufacture; metalurgy; shipbuilding; chemical engineering; furnaces; agriculture; railways; surface treatment and electrical construction.

The company's selection procedure for standard and special fans is completely computerised and all catalogues include capacity and acoustic data.

Further details may be obtained from Hevac Ltd, Lomond Avenue, Fairview, Dublin 3, (Tel: 373796).

## Europair

The Lau Blower Company, Dayton, Ohio expanded their manufacturing facilities to Europe ten years ago. To take advantage of the geographical marketing strength of Europair, the plant was transferred to Europair International who now operate the factory on a licence basis.

Lau in Belgium build a wide range of standard single and double inlet centrifugal fan assemblies for belt drive and direct drive applications. Sizes are in nominal impeller diameters from 7" to 30" with impeller widths up to 10". Volume flow rates range from 200 to 50,000 CFM meeting the requirements of most residential and commercial air moving applications.

Further information: Europair Ireland Ltd, Europair House, 3 Ardee Road, Rathmines, Dublin 6. (Tel: 975747/975188/975890).

## IF YOU WANT ROOF UNITS WE HAVE A STOCK ANSWER

### PRODUCTS



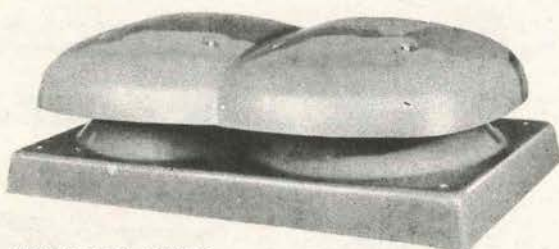
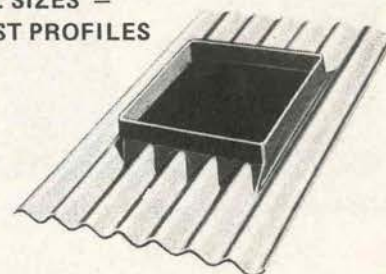
A COMPLETE RANGE OF  
STANDARD ROOF UNITS



ROOF OR WALL  
CENTRIFUGAL UNITS



SOAKER SHEETS  
ALL SIZES —  
MOST PROFILES



TWIN FAN UNITS



VERTICAL EXTRACT UNITS

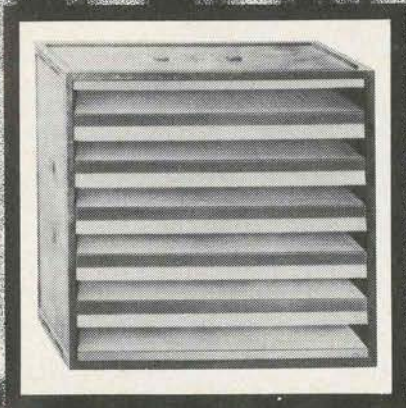
# DAN CHAMBERS LTD

<https://arrow.tudublin.ie/bsn/vol18/iss1/1>  
DOI: 10.21427/D7MT4K

3, Echlin Street,  
off James's Street,  
Dublin 8. Tel: 720448/784953.



# Luwa High Efficiency Filter 'N6'



## The space saver

The Luwa range of high efficiency filters covers approximately 140 variations, from fine dust filters to mechanical filters. Prominent amongst the range is the Luwa N6.

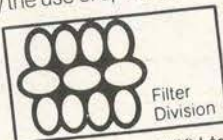
The N6 high capacity filter couples high efficiency (99.999% by sodium flame test BS 3928/65) with low pressure drop. The filter's high capacity is achieved by Luwa's special pleating technique which incorporates up to four times the usual amount of media in a standard 2' x 2' x 11½" cell, giving a capacity of up to 2,000 cfm – that's twice the usual air volume – saving on space and installation costs.

Uniform spacing between pleats is maintained by the use of specially

prepared threads. In addition to increasing the face area of the filter (by 50 times compared with unpleated material) and increasing the dust holding capacity, pleating also gives the filters strength and flexibility, enabling them to be further processed to form strong, self-supporting elements.

All Luwa filters are designed with wide safety margins, manufactured with the utmost care from high quality materials and thoroughly tested to the guaranteed standard of filtration. Stringent quality control of every filter and long experience in development and production ensure the high quality of all the filters in Luwa's comprehensive range.

If you'd like to know more, write to us or give us a ring.



Luwa (UK) Ltd.

# Luwa

36-41 High Street, South Norwood, London SE25 6HG.  
Telephone: 01-653 6515. Telex: 25542.

Luwa. An International Company with Manufacturing Plants or Representatives in over 100 countries.



# NEW PRODUCTS

## Mountain Air in the Office

Colt International Ltd., have produced an addition to their Jetstream conditioning equipment which can have a marked effect on the health and general well-being of people indoors.

The Jetstream can now be supplied with an integral ion generator which introduces a stream of negative ions (negatively-charged air molecules) into the airflow. The benefits of a negative ion-rich environment are:

1. Increased efficiency of breathing due to easier exchange of gases in the lungs.

2. Heart-beat reduced.

3. Reduced level of Serotonin in the blood, thus easing tensions, reducing the blood pressure, relieving some types of migraine.

4. Relief to many sufferers from hay fever, bronchitis, asthma, etc.

5. There is also evidence that some persons will obtain an increased resistance to infection from respiratory ailments such as influenza.

Frequently, the atmosphere within buildings, particularly in city areas, has a very low negative ion count and the preponderance of positive ions causes an increase in the blood levels of a hormone called Serotonin. This hormone is involved in the control of processes such as sleep, the transmission of nerve impulses and the development of mood.

Increased Serotonin levels result in irritability, increased heart rate, stress, headache and a lack of mental efficiency, as well as aggravating complaints such as migraine, bronchitis and asthma.

High levels of positive ions also affect the respiratory system, making the lungs less efficient, causing shortness of breath and leading to mental fatigue and a reduced resistance to stress.



*The latest addition to the Jetstream range from Colt International.*

Many people have already experienced the beneficial effects of naturally occurring negative ionisation, but without recognising their cause. The relatively high ion count in clear mountain air, for example, contributes to its invigorating freshness.

The contrasting effects of positive and negative ions are clearly demonstrated by the thunderstorm. It is the rising ion count which makes the build-up to a storm so oppressive to many people. When the storm breaks, the situation is reversed. The positive electrical charge in the air is dispersed and the storm actually creates negative ions, which account for the feeling of relief as the storm breaks.

This "top of the world" feeling can now be reproduced in a factory, office or shop with the Colt Jetstream incorporating Negative Ion Generator. At a distance of 20 metres from the unit, a concentration of negative ions double that to be found in fresh mountain air (around

2,000 per cc) can be created.

Further information: Colt International Ltd, 28 Main Street, Bray, Co Wicklow, (Tel: 863260).

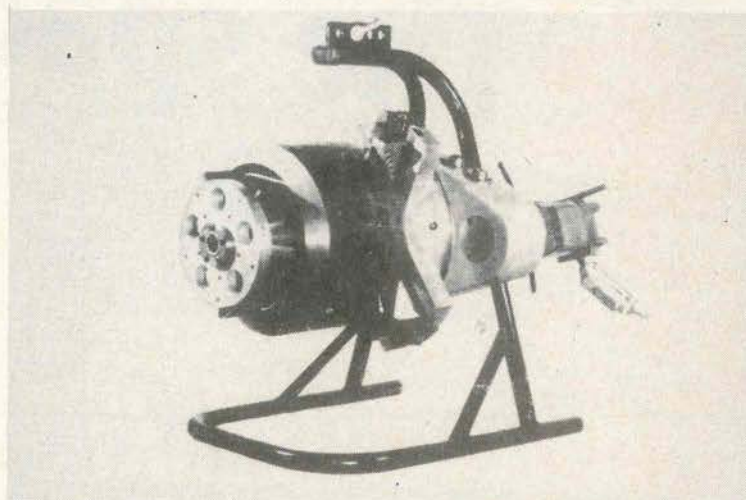
## Skid - Mounted Pipe Beveller

The Tri-Tool Model 714 Pipe Lathe System available from Performance Tools Ltd., Rain-

ford, Merseyside, offers an extremely versatile unit capable of bevelling 10", 12" and 14" pipes (schedules 10 through 160).

The unit, which is hydraulically driven, is mounted on a robust skid frame allowing it to be easily and quickly positioned across a 'fab shop' floor or over flat ground where used on site.

In a single operation, the Model 714 bevels, end squares, cuts land and counter bores



*Photograph shows new TRI-TOOL Skid Mounted pipe bevelling tool currently being introduced to UK and associated markets by Performance Tools Ltd.*



# NEW PRODUCTS

pipes at production speed. The quality of the bevel is such that the unit is approved for use with all class of pipework for installation in refineries, oil terminals, power plant, chemical works and other similar activities.

The firm are at present negotiating an Irish agency. Meanwhile information from: Performance Tools Ltd., P.O. Box 73, Rainford Industrial Estate, St. Helens, Merseyside WA11 8LT, England.

## External Heater Panel for Tanks

Hotfoil have introduced a new heater panel, the type VFP, which fits externally to storage tanks and hoppers.

Incorporating evenly spaced elements, this completely new heater panel is designed to dissipate uniform low density heat, which is essential for heating temperature sensitive materials used in the food, confectionery, chemicals and process industries. The VFP panel can withstand operating temperatures up to 100°C.

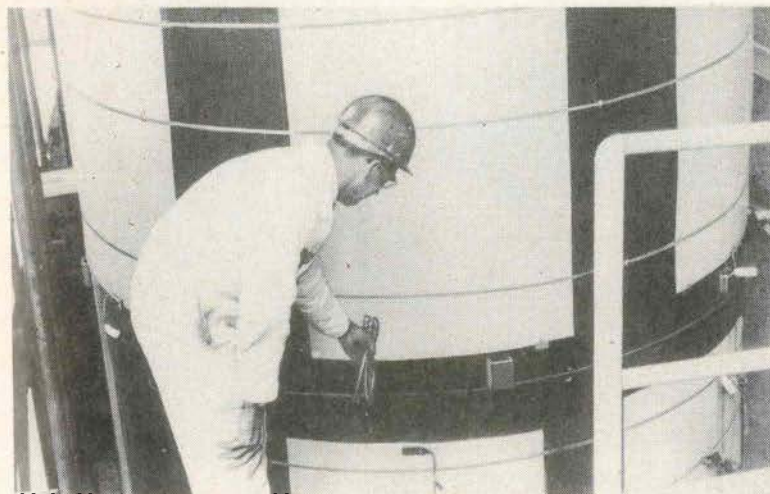
Constructed from patented foil elements contained within woven glass fabric the finished panel is impregnated with polyester resin. Suitable for both indoor and outdoor use, the VFP panel is semi-rigid, moisture proof and

it has an overall thickness of approximately 2mm. (0.08"). Complete with factory made terminations the heater panel is supplied with 3 metre (10 feet) long twin flat flexible leads covered with silicone rubber.

Available in two standard sizes measuring 1220 mm. x 915 mm. (4' x 3'), rated at 1000 watt and 1220 mm. x 458 mm. (4' x 1'6"), rated at 500 watts, the VFP panel is designed for operation on 240 volt single phase. It is easy to install — no drilling or draining of tanks is necessary. VFP panels are very light to handle and can be fitted to both cylindrical and rectangular tanks or hoppers by clamping the panel with banding strips. They can easily be bent to go around cylindrical surfaces having radius of curvature down to 610 mm. (2').

The VFP panel is ideal for frost protection of water tanks and to maintain a constant temperature within hoppers, storage tanks and process vessels. Typical applications include the heating of glucose, molasses, syrup, honey, chocolate, edible oils, beer, fuel oils, chemicals, caustic soda, powders, carbon black, flour, sugar, wax, effluents etc. The panel is also suitable for heating a host of other viscous materials and hygroscopic powders which must be maintained at elevated temperatures to prevent crystallisation and the build-up condensation.

Further information: Bruty Engineering, 8 Vergemount Hall, Clonskea Road, Dublin 6.



Hotfoil Heater Panel.

## Some people say we're old fashioned..

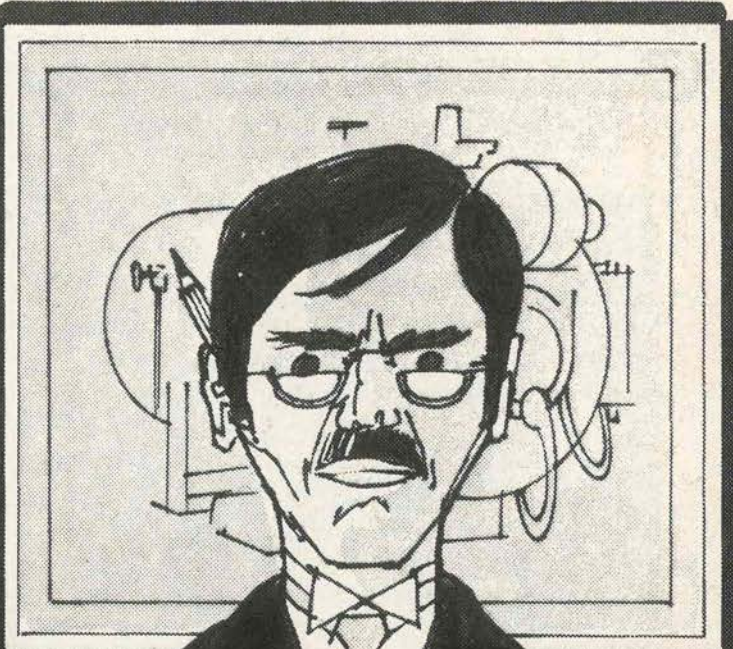
but if we were unscrupulous, cared more about the profit margin and cut a few corners, especially in the quality of materials we use, we could do better.

If we had more unskilled labour and fewer craftsmen we could join the big league.

But then we tend to think that the out-dated virtues of truthfulness reliability and a job well done pay in the end — even in the boiler business.

It's certainly worth tuppence to find out why, when people say we're old fashioned . . .

## We agree!



### Cradley Boilers



Cradley Boiler Company Ltd., Wood Lane,  
Cradley Heath, Warley, West Midlands, B64 7AN  
Telephone: Cradley Heath 66003/5 Telex 337024  
Agents for Ireland: G.W. Monson & Sons,  
18, Ballyblack Road, Newtownards, Co. Down,  
N. Ireland, Telephone: Newtownards 2350



# NEW PRODUCTS

## Blow Down Tank gives Fuel Bonus

The practice of the disposal of sludge from steam boilers by blow down into underground pits or directly into sewers has resulted in many accidents and damage.

The CN Blow Down Tank originally designed by Curwen and Newbury to overcome these dangers and provide safety factors, has now been modified to incorporate a patented CN Heat Recovery Unit.

At today's fuel costs, significant savings can be made by recovering heat from the blow down water, and the CN Blow Down Tank, fitted with its integral CN heat recovery unit, provides a simple, safe and economical method of handling steam boiler blow down with the added benefit of fuel cost saving, say the manufacturers.

The CN heat recovery unit provides a means of indirect

operation, thus avoiding the possibility of cross contamination by carry over which can occur in flash steam recovery systems thus contaminating the boiler feed water. It recovers heat from both continuous and intermittent blow down.

Further information: R S White Ltd, The Crescent, Donnybrook, Dublin.

## Safety Exhaust Head

The sudden lifting of a boiler safety valve can discharge steam and scalding water over a wide area, with serious consequences to people and property. With this in mind, the new patented CN Safety Exhaust Head has been designed and patented by Curwen & Newbury Ltd, for use with steam boiler safety valve discharge pipes.

Fitted with special horizontal side and drain connections, the

CN Safety Exhaust Head ensures no back pressure is created on the discharge side, as the fire area through the head is far greater than the inlet size, and the drain is sized to remove condensate. Another advantage is the considerable reduction of the noise created by steam discharge.

Further information: R S White Ltd, The Crescent, Donnybrook, Dublin.

## Weatherproof Industrial Switches

A new weatherproof, explosion-proof industrial switch featuring a rugged bronze housing able to withstand salt water and other corrosive environments has been introduced by Honeywell.

The new 80CX series is water, dust and oil tight, like all other members of the Honeywell CX range. What sets it apart is its bronze housing and cover — strong enough to withstand an internal explosion and resistant enough to stand up to salt spray. Stainless steel levers are available to match the corrosion resistance of the housing where required.

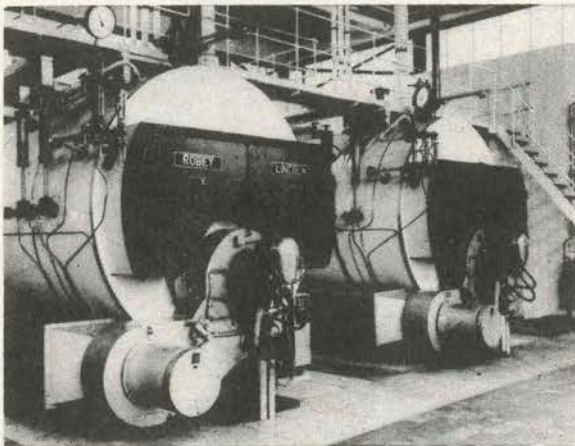
The 80CX is specifically designed for shipboard, offshore or dockside applications as a limit stop, valve operator or for flow control, but it is also suitable for foundry or chemical plant applications where difficult atmospheres exist. Approvals held by the 80CX include UL and CSA.

An almost unlimited variety of product variations can be supplied from available components, including potentiometers with or without switches. Field adjustable cams provide near simultaneous or sequential operation of up to six individual circuits, with operating points adjustable either clockwise or counter-clockwise, with or without spring return. Pretravel can also be field adjusted without tools.

With the introduction of the 80CX, Honeywell has also announced a variety of design improvements to the general purpose CX series. Most significant among them is the availability of a shorter, space-saving housing, and plunger operation is now available as an alternative to the many lever actuations offered. On most models, too, a redesigned terminal uses a self-lifting washer to facilitate wiring.

Further information: McKenna Distributors Ltd., 2 Astons Quay, Dublin 2.

## Robey Reliability



Part of a multiple Lincoln packaged boiler installation recently supplied to a large hospital in North West England.

When reliability and quality are required health authorities once again choose Robey.

Want to know why?  
Give us a call

**ND**

**ROBEY**

A Newell Dunford Company

S.L. Combustion Services Ltd.,

Ballyvolane, Cork. Tel: Cork 51411.

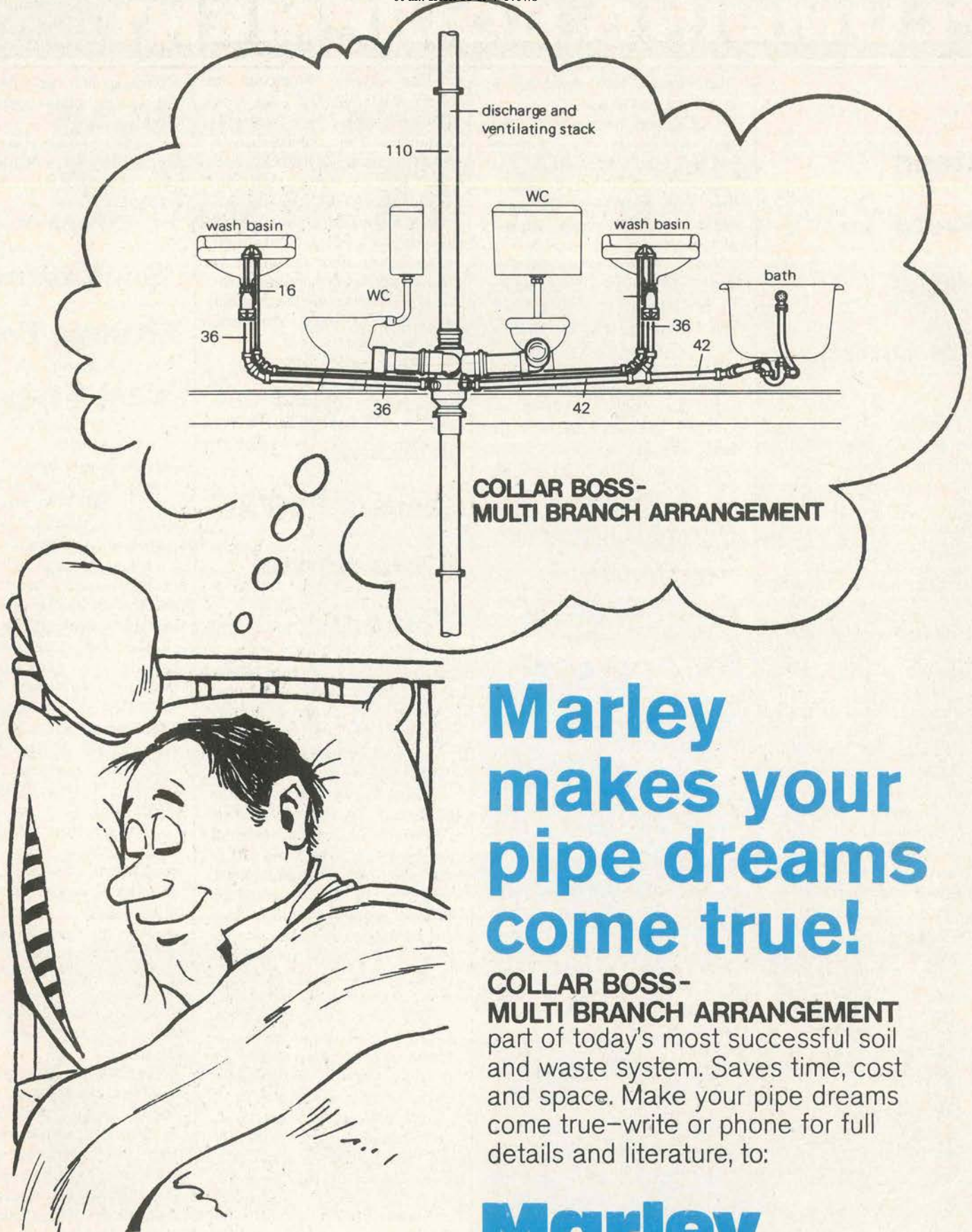
S.L. Combustion Services Ltd.,

100 Castlereagh Rd., Belfast BT5 5FT. Tel: Belfast 59282.



A rugged bronze housing (foreground) has been added to Honeywell's CX switch range to make the 80CX both explosion proof and corrosion resistant. Details from McKenna Distributors.





## Marley makes your pipe dreams come true!

**COLLAR BOSS-  
MULTI BRANCH ARRANGEMENT**  
part of today's most successful soil  
and waste system. Saves time, cost  
and space. Make your pipe dreams  
come true—write or phone for full  
details and literature, to:

## Marley Plumbing





# PLUMBING EQUIPMENT

## Sixteen Colours To Choose From Omega

K M Reynolds are the sole distributors for Omega Plastics and their range of quality bathroom products. The range comprises shower cubicles with door or with curtains, shower trays, bath panels, bath bars, bathroom cabinets, splashbacks and attractively designed mirrors. There is a choice of 16 colours across the range including Bali Brown, Harvest and the latest fashion colour, Sorrento Blue. (See start of page 2).

The shower cubicles are supplied with high quality mixer valves and flexible hose and hand set. An alternative model is available which has the back undrilled for fitting on alternative mixer valves and handset.

Each unit is sealed to prevent water penetration. A 30 7/8" x 30 1/2" shower tray is provided, which is made from high impact Polystyrene.

The Universal bath panel which can be cut to suit most heights and lengths, is available for the standard 5' 6" bath. This nests well and is easy to store.

The Luxury bath panel has a towel rail on the side.

All Omega bathroom fittings and accessories are of high quality and durability. The mirrors are made from distortion free float glass and are guaranteed for 15 years against silvering faults.

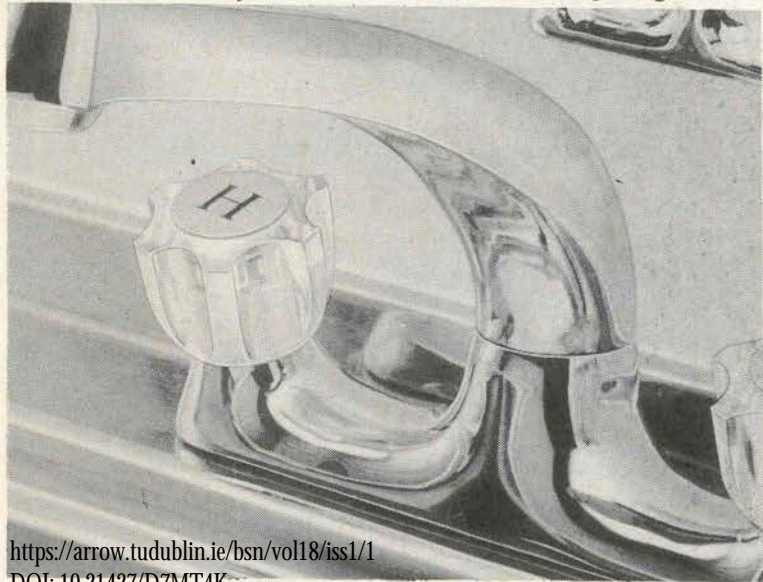
K M Reynolds are also the sole distributors in the Republic of Ireland for Du Bois trap and waste systems, Ekco toilet seats and plastic cistern; Koralle shower enclosures; Cascade showers, shower rails, shower attachments and curtains.

They are also agents for Ideal sanitary ware and brass fittings and Pilkington ceramic wall and floor tiles.

Further information: K M Reynolds, 13 Bath Avenue, Dublin 14. (Tel: 685079).

## Fundamental Re-Appraisal By Peglers

Peglers produce a range of high-quality high performance taps and bathroom fittings at their 20 acre manufacturing site in Doncaster, England. The company have taken the opportunity afforded by the new British performance standard BS 5412, which released the industry from the need to follow dated dimensional standards, to make what they call a "fundamental reappraisal" of tap design.



Peglers' dual flow sink fittings.

The results, illustrated in their catalogue of the new Danum range, are certainly striking. The comprehensive series includes single basin bath and kitchen taps, sink and basin mixers with high and low necks, mixers with pop-up waste facility, bath fillers, bidet sprays, and shower diverter units. All the designs are handsome and original, and available in various finishes, including chromium and gold plate.

Further information: Manning & McGregor Ltd, Connswater Industrial Estate, Belfast BT4 1AL, (Tel: Belfast 54429).

## Sanbra Fyffes' 'Continental' Flavour

Sanbra Fyffe's Irlin range of taps and mixers, has a distinct Continental flair and is capable of enhancing the appearance of the trendiest of modern bathroom fixtures.

Apart from the Irlin, Sanbra Fyffe also have available the Deltaflow Silver Spa range of luxury fittings which will satisfy the most exacting requirements. The range is complimented by Morado and Onyx fittings which are claimed to be the ultimate in sheer luxury and are available in gleaming chromium or gold plated finishes.

The versatile Topliss Shower fitting is well known as one of the most economical units from a price point of view yet containing the special feature of a large mixing area. Topliss has a 360 degree turning circle and the blending of the water takes place over most of the movement.

Conex instantor compression fittings are said to be the market leader and offer the most comprehensive range available. The unique compression qualities make the fitting suitable for copper, stainless steel and plastic tubes. There are special vented fittings available for central heating installations.

Sanbra Fyffe are also stockists/distributors of Wade

Couplings and can offer fittings for metric and imperial tubes from stock.

Further information: Sanbra Fyffe Ltd, Conex Works, Santry Avenue, Dublin 9, (Tel: 379291).

## 'Sculptured' Fittings From Ideal Standard

Biggest impact made by Ideal-Standard in the past 12 months was the launch of their Michelangelo collection, the most extensive single, design-coordinated, range of bathroom furniture ever to be made available in Eire. It was designed in Italy by Paolo Tilche.

The Michelangelo range has brought a new sculptured quality to bathroom furniture. Ideal-Standard is part of a European organisation, and the Michelangelo design has won wide acclaim in other European countries before it was introduced in Eire.

The extensive Michelangelo range includes three sizes of wash-basins - 63cm, 70cm and an extra generous 100cm (about 40ins. wide) - and there is a choice of floor-standing and wall-mounted toilets and bidets.

Michelangelo is available in five fashion colours Sorrento Blue, Harvest, Bali Brown, Penthouse Red, and Penthouse Blue, and White.

Paolo Tilche, who created the Michelangelo range, is a leading Italian designer. With the range, he produced shapes which have flair and feeling, appealing consistency of form and practical good sense - a combination for which Italian design has become famous.

Ideal-Standard also market a range of fittings, available in either gold or chrome, in their Jetline, Idealmix and Idealblend ranges. Available from the Jetline range are a bath-mounted mixer with a combined flexible hose and handspray, and a wall-mounted bath mixer with a combined flexible shower hose

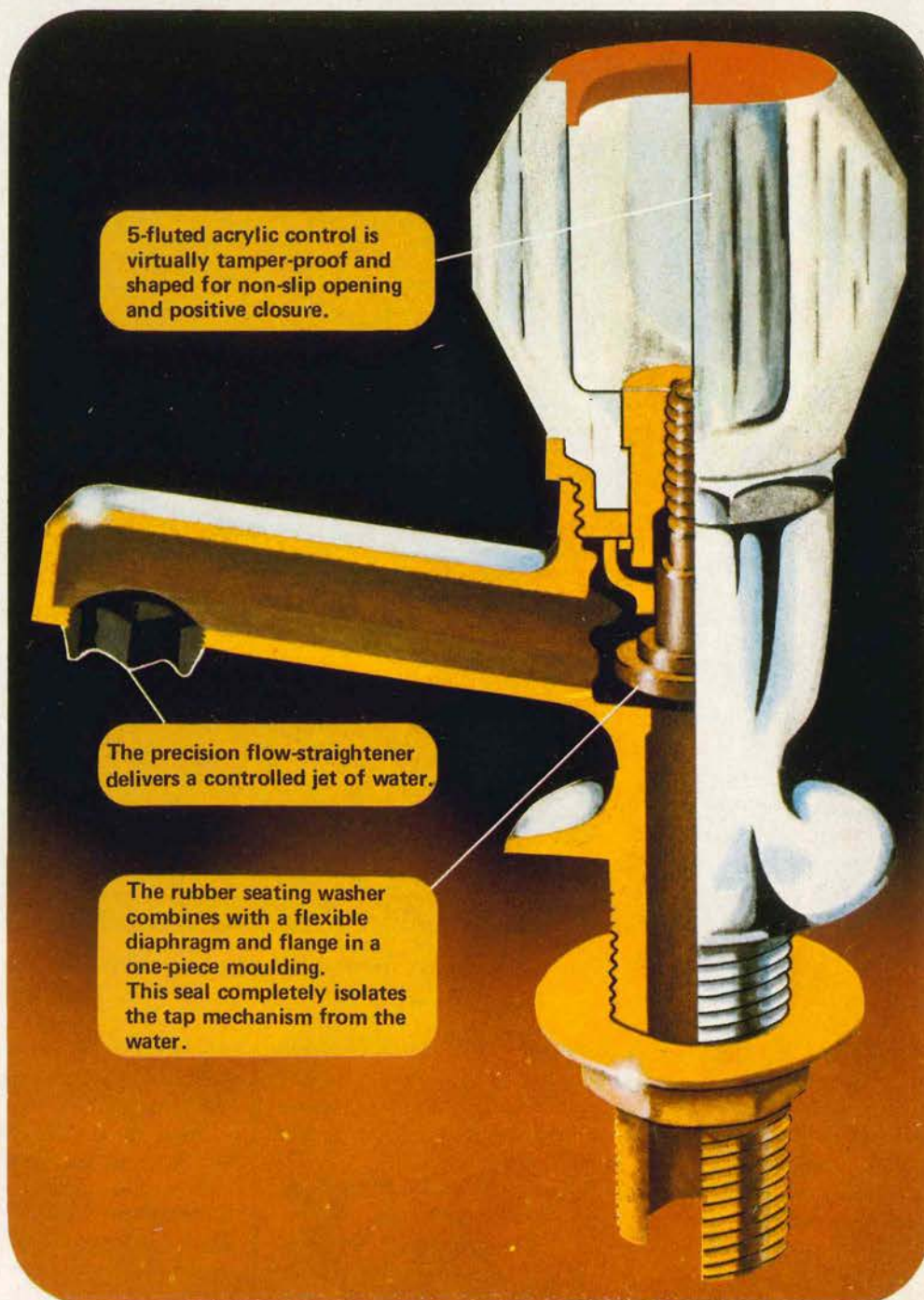


# SANBRA FYFFE **SAFLO** SETS A NEW STANDARD IN TAPS

The old British Standard BS 1010 laid down dimensional control of pillar taps. Performance is the heart of the new BS 5412 which replaces it. SAFLO, the first diaphragm tap in Ireland has been designed and produced by Sanbra Fyffe to BS 5412 and many exacting mechanical and hydraulic characteristics are embodied in these stylish new taps to give superb performance and ease of maintenance. Not surprising that these quality Irish taps have been approved by Dublin Corporation. You'll approve of them, too !



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Ref. No. 5301/SF



1/2" Pillarcock, C.P. on Brass  
Ref. No. 5301/SF



Sanbra Fyffe Ltd.  
Conex Works, Santry Avenue,  
Dublin 9. Telephone 379291.  
Telex 5325.





# PLUMBING EQUIPMENT



*The Paolo Tilche designed Michelangelo bathroom suite available from K M Reynolds.*

and handspray, together with conventional pillar taps and one-piece basin and bidet mixers.

Ideal-Standard's Idealmix thermostatic showers and mixers are precision made, accurately-controlled units of modern design which gives particularly neat installation. Their high quality manufacture and finish are combined with easily-understood operation and reliable performance.

Idealmix units have two controls — one to select the temperature, the other to determine the water flow rate. All models are fitted with safety stops which prevent the control being accidentally turned temperature, which could cause

scalding. A further safety benefit is that if, for any reason, there is a failure of the cold water supply, the flow is very quickly shut down.

Idealmix showers will operate on water heads of down to one metre in favourable conditions, but a head of 1½ metres, or more is recommended. The thermostatic mechanism operates on the bi-metallic principle and the design facilitates the replacement of the thermostat cartridge should this be necessary.

The Idealmix range of showers is: an exposed wall-mounted shower with return to wall; an exposed wall-mounted shower with top

connection: a built-in wall-mounted shower with concentric controls.

Also in the Idealmix range are thermostatic combined bath mixers and showers, and two thermostatic washbasin mixers. These, however, must only be used in systems with a minimum pressure of 3 bar (40 p.s.i.).

The Idealblend shower which has single lever control offers a choice of between built-in or exposed models, both designed for easy installation. With the Idealblend, precise control of temperature is provided by the same lever that gives control of flow.

Idealblend shower mixers have no washers or complicated

metal mixing mechanisms to wear out, and they are designed to operate entirely satisfactorily in normal roof-tank systems at pressure down to as little as one metre.

The built-in model is exceptionally compact, requiring the minimum of wall preparation. The exposed model is supplied complete with adjustable 'S' type supply connectors. The built-in model can be connected to a fixed arm and spray head or a flexible hose and handspray. The exposed model is for connection to a flexible hose and handspray only.

Further information: K M Reynolds, 13 Bath Avenue, Dublin 14, (Tel: 685079).





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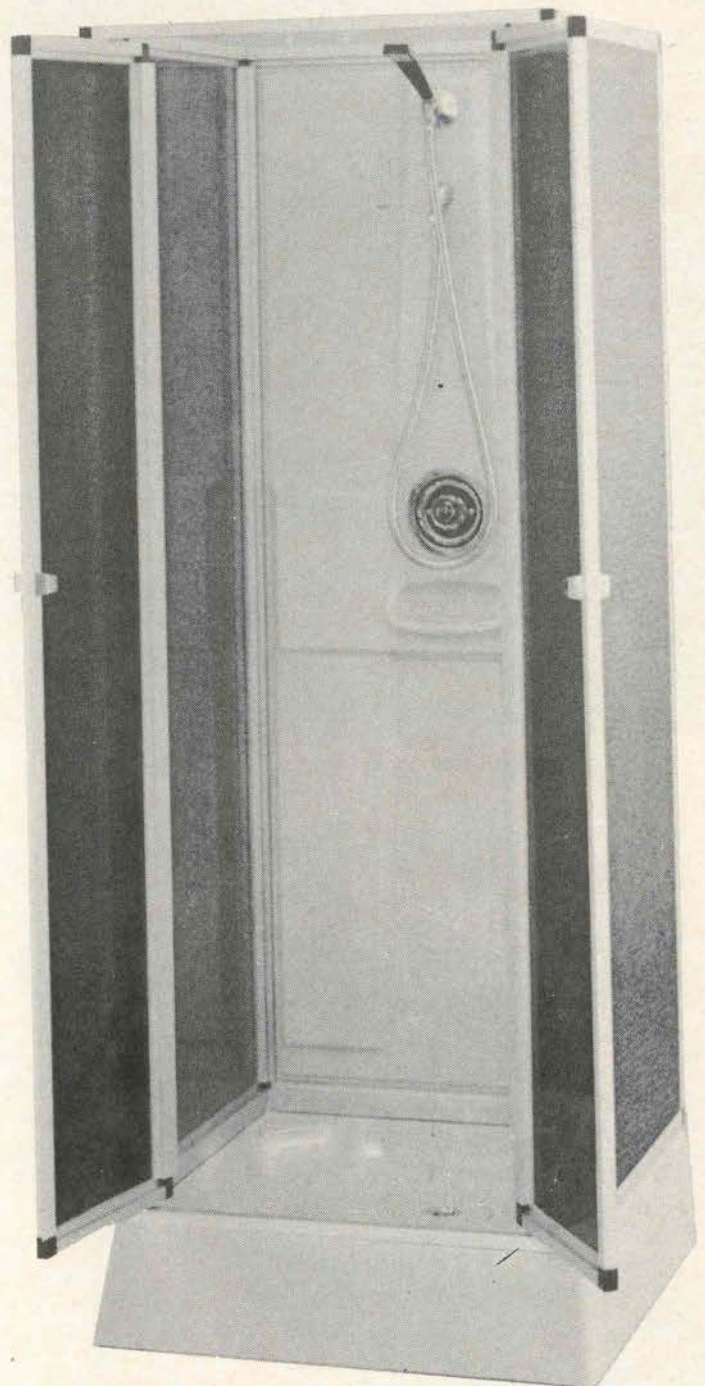
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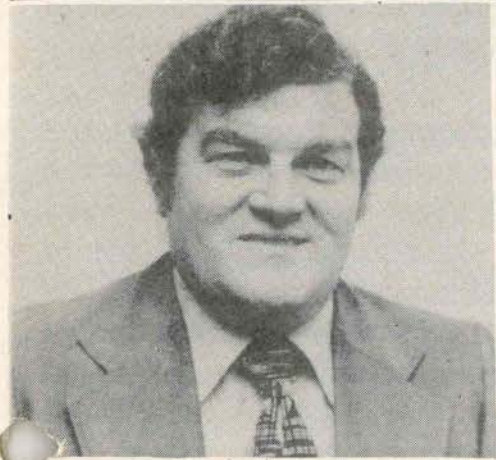
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# ENGINEERING INDUSTRY ASSOCIATION Annual Report 1977/1978



Noel Price, President.

Irish exporters of heating and cooling machinery performed "extremely well" in the year from November 1977 to November 1978, according to Mr Noel Price, President of the Engineering Industry Association, in his preface to the Association's annual report.

Overall growth, he says, has been good, and although it has not fully reached the predicted levels, it is still well above that of any other EEC member state.

"Output from the industry has fallen slightly from the 12% increase originally projected for 1977. In fact, output in the engineering industry grew at a rate of 9.8% in 1977 and it now appears likely that the growth rate for the sector, for 1978 as a whole, will be around 7.5% over that of 1977. Looking forward to 1979, it is difficult to see any real change in the current trends and because of this I feel that the industry's growth in output in 1979 will be around the 8% mark.

"It should be remembered of course that the recent performances of Irish industry in general, and the engineering industry in particular, are well above those of the industries in other EEC member states and that the cautious projections for 1979 are, nonetheless, for a continued substantial growth in output.

"Performance within the industry can also be measured by its export levels and, once again, 1977 proved to be an excellent year. Exports of

engineering products increased (in value terms) by 49.4% above 1976 and even allowing for price increases, the growth is still very substantial in real terms and continues to increase at a faster rate than other manufacturing export groupings," Mr Price continues.

"Within the engineering industry, the best export performers are, at present, computers, computer equipment and components, electronic components and telecommunications equipment. Exports of metal working machinery, food processing machinery and heating and cooling machinery also performed extremely well.

"It should be noted, however, that part of the growth in exports is attributable to the annual expansion in the industry's manufacturing base and because of this continual expansion, the massive percentage increases in the industry's exports, in recent years, have become somewhat smaller as the manufacturing base expands. This is evident in the figures currently available for 1978 where, although exports of engineering products continue to grow very substantially in real terms, the actual percentage increase is down on that of 1977.

"There are of course other elements which affect the growth of the engineering industry in this country. Many of these elements have become national topics in recent times and although it is not my intention to go into detail on this occasion I will take the opportunity to make a few comments.

"Industry is now in a situation where it is unable, due to shortages, to recruit adequate number of certain types of personnel. The actual categories have already been highlighted by the CII, EIA, AnCO and IDA, but knowing the problem areas is only one part of finding a solution, — it is necessary that the State, the industry and the educationalists devise and implement a suitable educational and training

strategy as a matter of urgency.

"Telecommunications: It is reasonable to assume that Irish industry in the 1970s should have access to a telecommunications network of the 70s. However, this is not the case."

Mr Price also adds that a major constraint on industrial growth is the inadequacy of our infra-structure i.e. roads, transport, ports, telecommunications, power, water and sewage. Immediate Government action is required in this area, he says.

On materials management, Mr Price says: "With imports in 1977 running at £3.1 billion — 57% of GNP — a high degree of professionalism is very necessary in materials management to ensure its contribution to a viable engineering industry. In view of the high costs and problems which relate to materials in today's industry — acquisition, cost, transportation, manufacture, marketing etc — it is essential that materials management be given equal priority with that of a firm's production and marketing requirements."

In the main report, Mr Niall F. Meghen, Director, says: "The boost given to the economy in 1978 by fiscal measures introduced by the Government to achieve one of its

(continued overleaf)



Niall F. Meghen, Director.



## ENGINEERING INDUSTRY ASSOC. ANNUAL REPORT CONTD.

primary objectives of reducing unemployment, cannot be maintained in the coming year in view of the Government's declared intention of reducing the level of borrowing.

"Measures to restrict consumption on the home market and reduce the level of imports in 1979 will make it all more important for the engineering industry to concentrate on the export market for the continuation of its growth. However, subject to keeping inflation below 10% and maintaining unit costs in line with overseas competitors, a similar increase in output to that recorded in 1978 should be achieved in 1979."

However, one of the EIA's major successes of the year was the Enquip Exhibition, aimed at the home market. The report says: "While the ability of the engineering industry in Ireland to successfully compete in world markets is amply demonstrated by the sustained growth of exports to over £550 million in 1977, the Council of the EIA was concerned that Irish engineering products and services seemed to encounter difficulties in gaining acceptance on the home market.

"In addition, the rapid growth in the numbers of industrial concerns established in Ireland over the last decade had created a need for publicising the engineering products and services available on the home market.

"In late 1976, the Council agreed to sponsor an exhibition aimed principally at the internal markets of both the Republic and the North of Ireland. The Royal Dublin Society, at the invitation of the EIA, agreed to act as organisers of the exhibition and following a number of meetings, the name "Enquip" — Engineering and Industrial Equipment Exhibition was adopted; the exhibition was to be held at the Royal Dublin Society's Showgrounds in Ballsbridge from 7 to 11 February 1978".

The report goes on: "The "Enquip" Exhibition was the largest exhibition ever held in Ireland of engineering products, and services, and all available space in the Simmonscourt Pavillion at the Royal Dublin Society's Showgrounds was taken up prior to the opening of the exhibition. Of particular satisfaction to the sponsors and organisers was the fact that over 60 per cent of the exhibitors

were Irish-based manufacturing companies, and that no overseas marketing of stand space was necessary."

The Council of the EIA are fixing the date for the next "Enquip" exhibition for February 1980, adds the report.

On industrial training, the report says the Association has long campaigned for the phasing out of the levy/grant scheme in its present format, and so welcomes the move by the Engineering Industry Training Committee to introduce "Netting" of the levy in 1979, followed by exemption in 1980 for those firms whose level of training meets the standards laid down by the Committee.

"In this connection it is important that all engineering firms co-operate with their local AnCO training adviser in completing the "Rating" document currently circulating in the industry on a trial basis so that they can qualify at the earliest possible date for exemption from the levy/grant scheme."

Shortage of skilled personnel is a serious constraint on the expansion of industry and it is in industry's own interests to ensure that the necessary resources are made available to adequately fund a comprehensive training programme to meet, not only the needs of existing industry, but also that of potential new industry, says the report.

"When the trade apprenticeship period was reduced from five to four years in September 1974, a Committee was established to advise the Council of AnCO on the curriculae which each trade should follow while the apprentice is on educational or training release. The Association is represented on this Committee by its Director in view of the important role that skilled craftsmen play in the engineering industry.

"Concern must be expressed at the slow rate of progress of the Committee, particularly in the areas of Testing and Certification of Apprentices, which in the view of the Association should be introduced at the earliest possible date following the finalisation of curriculae and agreement on the length of time each apprentice should spend on off-the-job training and further education."

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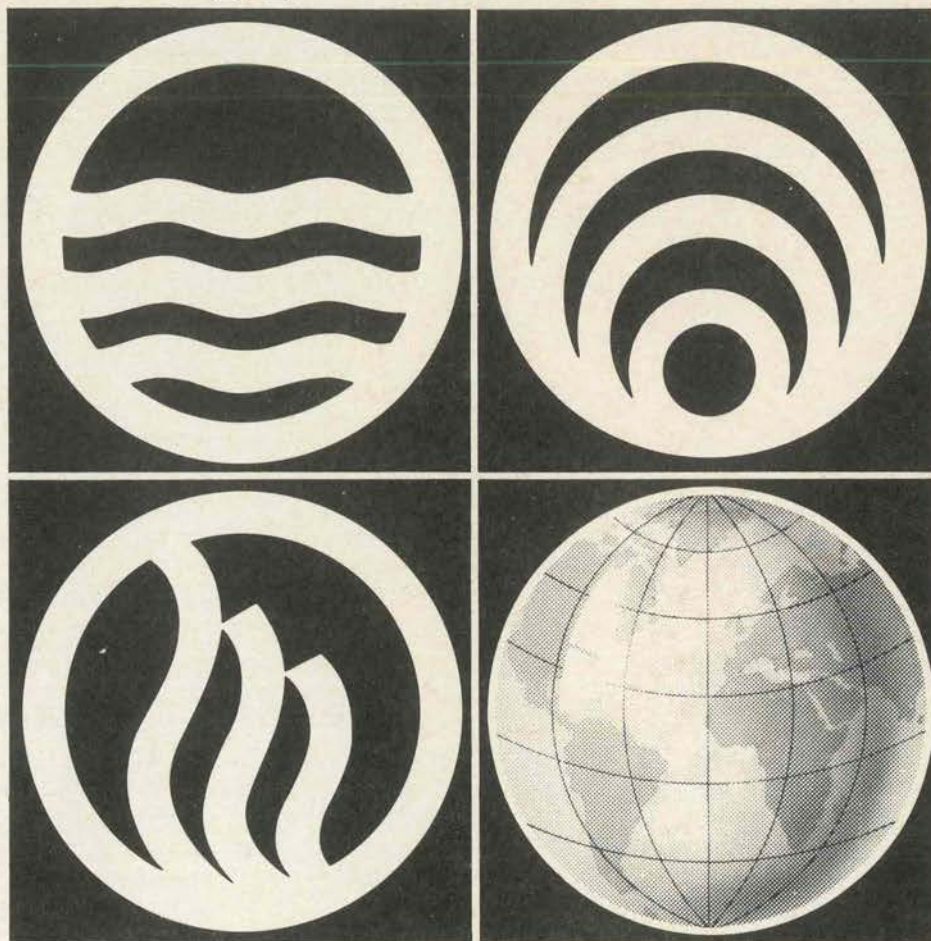
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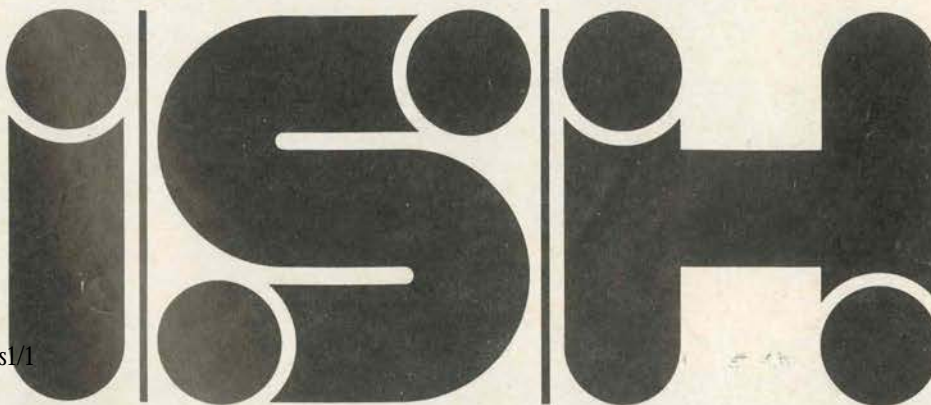
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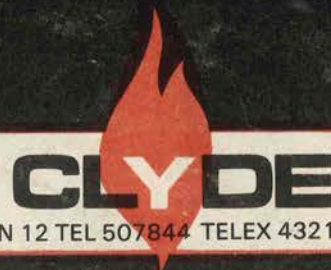
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